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**"Strategic Trends of Global Denuclearization and Nuclearization -
 Implications for Japan's Security Policies, Regional Stability and the
 TMD-Debate in East Asia " ***

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**1. Introduction: Missile Proliferation and Missile Defense at the Dawn of the 21st
 Century**

"Nuclear trends in Asia are moving in the opposite direction. Asia contains the only nuclear weapon-state that is increasing its arsenal of nuclear and ballistic missiles (China); the two states which have recently chosen to declare their nuclear capabilities (India and Pakistan); the third (and now unique) 'threshold countries' (Israel); and the two countries found guilty of violating their non-proliferation commitments (Iraq and North Korea). In addition, South Korea and Taiwan ran military nuclear programmes in the 1960s and 1970s; Iran has long been suspected of activities prohibited under the NPT; and Japan is recognised as having a latent capability to produce nuclear weapons quickly. Lastly, the US and Russia are major Asian powers as well. Asia therefore comprises more nuclear powers or nuclear-capable states than any other region in the world."

(So the French expert *Therèse Delpech*, Director of Policy Planning at the Atomic Energy Commission, Paris, in an analysis of December 1998¹)

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- This analysis is based on a number of previous publications of the author as the result of a research project sponsored by the Volkswagen Foundation. See F.Umbach, 'World Gets Wise to P'yongyang's Nuclear Blackmail – Part One', *Jane's Intelligence Review (JIR)*, September, pp. 33-36; Part Two, *ibid*, October, pp. 35-39; *idem*, 'Nuclear Proliferation Challenges in East Asia and Prospects for Co-operation – A View from Europe', in: Kurt W. Radtke/Raymond Feddema (Eds.), 'Comprehensive Security in Asia. Views from Asia and the West on a Changing Security Environment and Their Implications for Europe' (Brill Publishers: Leiden-Boston-Cologne 2000), pp. 66-133, and *idem*, 'Proliferation Challenges in the Asia-Pacific Region and the Implications for the U.S.-Japanese Security Alliance', in: JIIA (Ed.), 'Security of Asia-Pacific. Mid-Term Report', Tokyo, March 1999, pp. 92-107 as well as some publications in German.

The year of 1998 seems in many respects a turning point or even a "*irreversible milestone*" in the nuclear age and of global nonproliferation efforts to curb the spread of mass destruction weapons (MDW) and related technologies and materials. It was certainly a year with new emerging perilous trends which have threatened the hitherto rather successful regional and global non-proliferation policies during the last years. In May 1998, India and Pakistan conducted nuclear tests which might trigger a full-fledged nuclear and missile race in the region and further undermine stability in South Asia. In July, Iran tested its 1,300km maximum range *Shahab-3* ballistic missile which is a version of North Korea's *No-dong-I* (also called *Rodong-I*) missile. It will give Iran the capability to target U.S. and European allies in the Middle East as well as their armed forces deployed in the region. In August 1998, North Korea tested its *Taepo-Dong-I* missile over Japan, which — together with the revelation that North Korea is constructing a suspicious underground site —, has threatened the *October 1994 Agreed Framework* and therewith the *KEDO*-process, aimed to discourage nuclear proliferation on the Korean Peninsula.

In this context, it is important to note that the major source of proliferation threats in East Asia (and particularly Northeast Asia) is not transfers from outside into the region, but instead domestic production lines in China as well as North Korea and accordingly, missile and related technology transfers out of this region to the Gulf-, the Middle East and other regions of the world.

In regard to the threats of mass destruction weapons (MDW), Japan's security policy as a non-nuclear weapon state (NWS), is mainly affected by nuclear ambitions of four *de facto* or potential nuclear powers in the Asia-Pacific Rim and South Asia:

- (1) by North Korea as a "*rogue state*" and its reluctance to submit itself unambiguously to the requirements of the NPT-regime;
- (2) by China as the major potential military rival of Japan in the 21st century with its own ambitious modernization programs for its strategic nuclear forces and with its ambivalent proliferation policy of nuclear-related technology and end products (such as missiles) to other nuclear threshold states as well as

¹ Thérèse Delpech, 'Nuclear Weapons and the 'New World Order': Early Warning from Asia?',

(3) by the Indo-Pakistani nuclear arms race and weaponry programs and

(4) impacts of the nuclear legacy of the former Soviet Union (brain drain of nuclear and ballistic missile scientists as well as illegal smuggling of fissile material to potential nuclear threshold countries).

Furthermore, two neighboring countries of Japan — South Korea and Taiwan — seemed from the late 1960s to the beginning of the 1990s on the brink to become a NWS. But they stopped their clandestine nuclear weapons programs due to massive political pressure of the U.S. and after having received some kind of security guarantees as well as agreed military support when they are confronted with military aggression.²

The dangerous trends in South Asia and on the Korean peninsula in 1998 have also revealed the wide gap between Western and Asian nuclear perspectives. In contrast to the U.S., Russia, Great Britain and France which already have reduced and still continuing to downsize their nuclear arsenals, nuclear trends in Asia move obviously in another direction. Indeed, the most complex nuclear challenges "*are located in Asia and nowhere else*" as *Therèse Delpech* has argued.³

Understandably, the nuclear tests by India and Pakistan in May 1998 were, *inter alia*, a particular shock for Japan which has always actively pursued and supported regional as well as global non-proliferation efforts to contain the spread of nuclear, chemical, biological weapons and ballistic missile systems as their delivery systems. Although South Asia has a quarter of the world's population and has important implications for Japan's future energy security (sea-lanes of communication to the Middle East and the Gulf and its access to energy sources in Central Asia), *Tokyo* has had rather limited ties with this region until very recently, and those have been almost exclusively economic. In the meantime, however, Japan has established a strategic security relationship with India that is clearly directed to counterbalance a perceived growing Chinese weight in

Survival, Winter 1998-99, pp. 57-76.

² To Taiwan's nuclear ambitions see Gerald Segal, Wall Street Journal, 4 August 1998, p. 8; Tim Weiner, International Herald Tribune (IHT), 22 December 1997, p. 4; David Albright/Corey Gay, 'Nuclear Nightmare Averted', The Bulletin of the Atomic Scientists, January/February 1998, pp. 54-60, Andrew Mack, 'Potential, Not Proliferation', *ibid*, July/August 1997, pp. 48-53, and William Burr, 'New Archival Evidence on Taiwanese 'Nuclear Intentions', 1966-1976', National Security Archive Electronic Briefing Book (via Internet: www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB20/). To South Korea's nuclear ambitions and abandoned programs see A.Mack *ibid* and in particular Michael J. Siler, 'U.S. Nuclear Nonproliferation Policy in the Northeast Asian Region During the Cold War: The South Korean Case', East Asian Studies, Autumn-Winter 1998, pp.41-86.

the region, thereby pushing aside any of its traditional security concerns in regard to India's nuclear weapon's program and the Southasian nuclear arms race between Pakistan and India.⁴

The nuclear tests of India and Pakistan have so far only displayed a nuclear weapon-capability and not a credible nuclear deterrence posture (both states seem still years away to acquiring it). But they might change the strategic evolution of the entire region and significantly influence the relationship between India and Pakistan. It is demonstrated by the fact that at the time of the US cruise missile strikes against *Osama bin Laden's* training camps in Afghanistan in August 1998, Washington sent *General Joseph Ralston*, the Deputy Chairman of the Joint Chiefs of Staff, to Islamabad in order to make clear that the US cruise missiles were not Indian, and were not striking Pakistan.⁵ Furthermore, the tests might in particular deteriorate the already ambivalent relationship between India and China which may acquire global dimensions: A future unstable Sino-Indian geopolitical rivalry, maybe even more than the ambiguous China-Japan relationship, thus may become one of the greatest security challenges in the 21st century of an increased multipolarity.

Moreover, the nuclear tests have threatened global efforts to contain nuclear weaponry. The political fallout, such as the US credibility and prestige, might thus have, for instance, a profound impact in the Middle East.⁶ It might encourage Arab states, and Iran, to break Israel's regional nuclear monopoly. Israel has already become alarmed few months before the Indian and Pakistani tests about Iran's ballistic missile projects, such as the *Shahab-3* missile, developed with the assistance of Russia and China. Hereby, Iran's nuclear ambitions and missile capabilities might play a much more important role than Pakistan's nuclear capabilities ("*Islamic bomb*") as a deterrence to Israel's nuclear arsenal. Furthermore, it is widely believed that Saudi Arabia and — perhaps Libya — have funded Pakistan's nuclear programs and that a number of Pakistani technicians are working in Iran's main missile program. Pakistan's newly acquired skills and test data might thus find also a way to Iran. The US and Western

³ Thérèse Delpech, 'Nuclear Weapons and the 'New World Order'', here p.58.

⁴ To Japan's traditional security concerns vis-à-vis Southasia and its promotion of dynamic non-proliferation and disarmament policies see Satu P. Limaye, 'Tokyo's Dynamic Diplomacy: Japan and the Subcontinent's Nuclear Tests', *Contemporary Southeast Asia*, August 2000, pp. 322-339.

⁵ See Flora Lewis, *IHT*, 28 August 1998, p. 9.

⁶ See also Juan Romero, 'Charting Reactions to the Islamic Bomb', *JIR*, March 1999, pp. 32-37.

sanctions imposed on India and Pakistan might intensify the Arab frustrations on the policy of "*double standards*" by the West which allowed Israel to develop an arsenal of an estimated 200 nuclear warheads and which excludes it from international inspections. If a new arms race, including ballistic missiles and nuclear weapons, in the Middle East will take place, then Israel might feel to be forced to follow India's example and to openly demonstrate its nuclear capabilities to deter potential Arabian enemies. Continual development and procurement of ballistic missiles might thus threaten to erode the nuclear non-weaponized deterrent elsewhere. The Middle East, however, is not the only region where the nuclear explosion and ballistic missile tests might have grave consequences for stability.

The article will consider the global proliferation network between China, Pakistan and North Korea during the 1990s, Russia's ambiguous denuclearization and nuclearization tendencies of its security policies, China's nuclear modernization efforts and its ambivalent non-proliferation policies as well as the situation of the Korean peninsula and the prospects for curbing North Korea's nuclear ambitions and ballistic missile exports. Against this background, I will outline some of the implications for Japan's security policies and the TMD debates in East Asia.

2. The Global Proliferation Network between China, Pakistan and North Korea

China's military assistance in promoting and fastening Pakistan's missile programs has long been known as a major source of nuclear and missile know-how and technologies to Pakistan and was a matter of ongoing friction in the bilateral relationship between Washington and Beijing since the beginning of the 1990s. China is believed not only to assist Pakistan's nuclear and missile programs directly but also indirectly through missile technology transfers via North Korea to Pakistan. According to U.S. experts, China changed its tactics after its *M-9* and *M-11* missile deliveries to Pakistan which provoked strong U.S. criticism and hampered a *rapprochement* with Washington. Instead of its missile exports, China began rather to support financially Pakistan's expansion of a ballistic missile infrastructure and to provide the soft technology as well as engineering for the *Ghauri*-missile project. Together with the problem of dual-use technologies, those new forms of proliferation of *Weapons of Mass Destruction (WMD)* and delivery systems are much more difficult to trace. In this context, North Korea

served as a conduit for part of Beijing's assistance. *Pyongyang* had to provide hardware and components from its *Nodong* and *Taep'o-dong* missiles which limited China's direct military assistance to Pakistan's missile projects to those areas in which North Korea was still coping with technical problems, such as guidance.⁷

The Secret China-Pakistani Nuclear Co-operation	
1974	China assigns 12 scientists to help Pakistan develop a nuclear device.
1975	China helps Pakistan build nuclear-weapons research centres.
1977	China and Pakistan plan to build and test Pakistan's first nuclear bomb, but the fall of Pakistan's government suspends the operation.
1983	China gives Pakistan complete design for a nuclear weapon and enough uranium for two bombs, according to U.S. intelligence.
1986	China reportedly gives Pakistan enough tritium gas for 10 nuclear weapons, as well as enriched uranium.
1989	China allows Pakistani scientists to observe a nuclear test.
1994-1996	China helps to build 300 megawatt nuclear power plant at Chasma and tritium gas purification plant at Khushab.
1995	A Chinese company sells 5,000 ring magnets used to make weapons-grade uranium to a nuclear research laboratory at Kahuta.
1996	To avoid U.S. sanctions, China pledges not to provide assistance to unsafeguarded nuclear facilities in Pakistan. It also signs the CTBT.
1998	Pakistan tests its first nuclear bomb.

Source: Nayan Chanda et.al., 'The Race is On', FEER, 11 June 1998, pp.20-22, here p.22.

Although the nuclear test of Pakistan was certainly not in the Chinese interest and Beijing had obviously tried to persuade *Islamabad* not to answer India's nuclear test with an own one, it reserved its condemnation only for India. Given China's close involvement in Pakistan's nuclear and missile programs (such as deliveries of 600km-range *M-9/DF-15* and 280km-range *M-11/DF-11* missiles) — a highly secret and extremely close relationship between both armed forces for four decades and an evolving Sino-Indian nuclear rivalry in the 21st century —, Beijing has no strategic interest in ending its close strategic relationship with Pakistan — albeit it has quietly stopped supporting Islamabad on the *Kashmir* conflict and urged Pakistan to solve the

⁷ See Josep Bermudez, 'A Silent Partner', in: Jans's Defence Weekly (JDW), 20 May 1998, pp. 16-17, here p. 17.

dispute with India by normalizing its relationship with *New Delhi* in the last years. In general, however, it seems rather unlikely that China will cut its close relationship with Pakistan.⁸ Indeed, it insists to maintain a similar geostrategic relationship with Pakistan like the U.S. relationship with Israel. Moreover, Chinese experts suspect that the United States had not been surprised by India's nuclear tests but is secretly pleased with an Indian nuclear counterbalance to China.⁹ Against this background of a new strategic gamble in South Asia, it is expected that China might also assist Pakistan in the further weaponization process and by creating a credible minimum deterrent against India¹⁰ though it has promised in May 1996 towards Washington no longer to assist unsafeguarded Pakistani nuclear facilities.¹¹

The *Ghauri*-missile project of Pakistan, however, was primarily developed with North Korea's assistance, though Pakistan has denied to need any foreign support. Thus Japan's Foreign Minister, *Masahiko Komura*, has accused Pakistan to import missiles from North Korea's part of the country's nuclear program.¹²

South Asia seems at first glance very far from Northeast Asia and Japan. But the long distance is thus no longer a barrier against negative security impacts on Japan. The clandestine interregional Pakistani-North Korean proliferation network cooperating to evade international controls and sanctions is a good example for the increasing globalization of security policies. Besides the more well-known Chinese-Pakistani ties in the nuclear and missile field, the North Korean-Pakistani relationship dates back to the 1970s. In the 1980s, both countries created stronger ties which included mutual military assistance to Iran during its eight-year war with Iraq. While North Korea acquired nuclear technology from Pakistan, *Islamabad* benefited primarily from ballistic missile technology from Pyongyang. Together with other Iranian specialists, Pakistani officials visited North Korea in 1992 and 1993 to observe *No-dong* missile development and

⁸ See also Ahmed Rashid, 'Comrades-in-Arms', *Far Eastern Economic Review* (FEER), 25 June 1998, p. 13.

⁹ See Nayan Chand et.al., 'The Race is On', *ibid.*, 11 June 1998, pp. 20-22, here p. 22.

¹⁰ Reportedly, Beijing assured Islamabad that bilateral military cooperation would continue, and offered its "*unqualified support*" to Pakistan - see Ahmed Rashid/Shiraz Sidhva, 'Might and Menace', *ibid.*, 4 June 1998, p. 28 f., here p. 29.

¹¹ To China's May 1996 pledge see also the interview with U.S. Deputy Secretary of State, Strobe Talbott, in: *ibid.*, 18 June 1998, p.28.

¹² See Alexandra Harney/Farhan Bokhari, *Financial Times* (FT), 25 September 1998, p. 6.

tests.¹³ Pakistan's *Ghauri*-missile program has reportedly been dated to Pakistan's prime minister *Benazir Bhutto's* visits to China and North Korea in December 1993 and started in early 1994.¹⁴ According to the U.S. expert *Joseph S. Bermudez*, Pakistan signed several agreements with North Korea in late 1993 which included transfers of *Nodong-I* technology, components and probably several missiles.¹⁵ In 1995, a North Korean military delegation visited Pakistan and finalized the agreement to provide Islamabad with critical missile components of its *No-dong* and *Taep'o-dong* rockets.¹⁶ According to official U.S. sources, Pakistan purchased *No-dong-I* missiles from North Korea in a secret 1997 deal that caused the US administration to impose economic sanctions on May 4, 1998 against both countries.¹⁷ However, the USA was completely unaware of the Pakistani-North Korea proliferation linkages as US officials have conceded.¹⁸

Although the extent of North Korea's assistance to Pakistan's nuclear development program remain unknown, the clandestine bilateral military technology cooperation finally seems to have resulted in an exchange of test data on both sides which was particular important for North Korea's cash-strapped missile programs. Moreover, the *Ghauri*-missile was developed on the basis of North Korea's *Nodong*-missiles and, reportedly, sold even completely to Pakistan in 1997. The liquid-fueled *Ghauri missile* is basically an enhanced version of the North Korean *No-dong 1* (also called *Rodong 1*) missile which has a similar maximum range and itself is a *Scud*-derivate developed in Russia in the 1960s.¹⁹ In this light, North Korea and China contributed directly to South Asia's accelerating nuclear arms race.

Against this background, the *Ghauri* missile is based at least on key technologies smuggled from North Korea. Pakistan's more ambitious missile project, called

¹³ To the Pakistani-North Korean connection see in particular Joseph Bermudez, 'A Silent partner'.

¹⁴ See Wade Huntley, 'The Proliferation Network', NAPSNET, Special Report, 21 May 1998.

¹⁵ See *ibid*, here p. 16 and Joseph S. Bermudez, 'Ballistic Missile Development in the DPRK', JDW, 20 May 1998, pp.16-17, and *idem*, 'Taepo-dong Launch Brings DPRK Missiles Back into the Spotlight', JIR, October 1998, pp. 30-32, here p. 31.

¹⁶ See Joseph Bermudez, 'A Silent Partner', here p. 17.

¹⁷ See R.Jeffrey Smith, International Herald Tribune (IHT), 15 May 1998, p. 4.

¹⁸ See Wade Huntley, 'The Proliferation Network'.

¹⁹ See Tim Weiner, IHT, 5 April 1998, p. 5

Ghaznavi, with a range of 2,000km, might also benefit from incorporated technologies and components from the *Taep'o-dong* missiles.²⁰

Despite numerous efforts to curb any missile exports from North Korea, Pakistan as well as Iran have become a major market for North Korean missiles as the only way to *Pyongyang* to earn hard currency. Iran's *Shahab-3* missile benefited not only from technology imported from Russia and China, but also from Iran's close missile collaboration with North Korea. It begun with establishing facilities for the maintenance and production of the *Hwasong (Mars)-5*, a reverse-engineered '*Scud-B*' missile. Later, it was followed by its participation in North Korea's *No-dong-I* program which allowed to transfer both technology and components into Iran's missile program.²¹

3. A Nuclear Superpower in Decline - Tendencies of Denuclearization and Nuclearization in Russia's Security Policies

3.1 The Denuclearization Efforts in the START Framework and the Constraints of the Modernization of Russia's Strategic Nuclear Forces

As the Russian minister for atomic energy, *V. Mikhaylov*, revealed for the first time in 1993 that the Soviet Union had in 1987 approximately 45,000 nuclear warheads in its arsenal²² — 12,000 more than the CIA had accounted in the mid of 1980s. In mid-1993, the most reliable estimate, based on data from the *U.S. Central Intelligence Agency (CIA)* and the Russian Ministry for Atomic Energy (*MINATOM*), specified the Russian nuclear legacy still on 32,000 strategic and tactical nuclear warheads. 15,000 of them are active, or deployed, and another 17,000 are in storage or awaiting disassembly and disposal.²³ With the ratification of *START-II*, the nuclear arsenals of the U.S. and Russia will be reduced to 3,500 to 3,000 warheads on each side.

²⁰ See Joseph S. Bermudez, 'A Silent Partner', here p. 17.

²¹ See Joseph S. Bermudez, 'Taepo-dong launch Brings DPRK Missiles Back into the Spotlight', here p. 30 f.

²² See Moscow News 40/1993, 1 October 1993, p. 5.

²³ See 'Nuclear Pursuits', The Bulletin of the Atomic Scientists, No. 4 (May) 1993, pp. 48-49; 'Estimated Russian (CIS) Nuclear Stockpile (July 1993)', *ibid.*, No. 6 (July-August) 1993, p. 57, and D. Lockwood, 'Report on Soviet Arsenal Raises Questions, Eyebrows', Arms Control Today (ACT), No. 9 (Nov.) 1993, p. 23.

Table: Reductions and Limits of Strategic Nuclear Warheads according to START-I and -II

	Mid 1991		START-I		START II	
	U.S.A	USSR/RF	U.S.A	USSR/RF	U.S.A	USSR/RF
ICBMs	2,450	6,612	1,444	3,258	500	795
SLBMs	5,760	2,804	3,456	1,744	1,728	1,744
Bomber	2,665	855	1,066	820	772	461
Total	10,875	10,271	5,966	5,687	3,500	3,000

Source: Frank Umbach, 'Die nukleare Rüstungskontrollproblematik und die Rolle der USA im postsowjetischen Raum', in: BIOst (Ed.), *Zwischen Krise und Konsolidierung. Gefährdeter Systemwechsel im Osten Europas* (Muenchen-Wien: Carl Hanser Verlag, 1995), pp. 360-371, here p. 360.

As former President *Boris Yeltsin* and his successor, *Vladimir Putin*, have repeatedly declared Russia would like to initiate following *START-III* negotiations to downsize the nuclear arsenals of both sides to less than 1,500 warheads whereas the U.S. has announced not to go further than 2,000 warheads.

At the same time and in a striking contrast to Russia's denuclearization efforts for its strategic nuclear arsenal, nuclear weapons in general have become the last symbol of the former superpower status in Russia. Consequently to that fact and the disastrous state of Russia's conventional armed forces, preparation for nuclear war with the USA appears to remain a high priority for the Russian military establishment and for defining a new military doctrine and nuclear strategy as we will see below.

In order to strengthen the "*negative control*" and to prevent any further erosion of its crippling command and control system, Russia has basically two options: (1) to lower the status of alert (de-alerting) of its Strategic Nuclear Forces, and/or (2) to change the doctrine of its national nuclear strategy and to reject all hair-trigger and accident prone "*launch-on-warning*" postures of the Cold War on which Russia traditionally relied on and which still dominates its nuclear control system. Russia has taken only the first choice and has reduced the status of alert of its nuclear arsenal instead of favoring option two or going even further (in cooperation with the United States) to an end-state of zero alert — so-called "*virtual arsenals*" (disassembled weapons under multilateral

inspection and monitoring).²⁴ The complete mutual detargeting of all strategic missiles on 30 May 1994 was the result of the bilateral agreement signed by US President *Bill Clinton* and *Boris Yeltsin* four months before. But it was rather a political and symbolic step towards the West which has been reiterated by *Yeltsin* in May 1997 during his *Paris* visit.²⁵ Militarily, this information can be retargeted in minutes if not seconds. Thus the agreement produced no significant changes in the operational launch readiness on both sides which are still regularly exercised.

Regardless of the *Duma's* ratification of *START-II* in April 2000 and the consolidation efforts of Russia's nuclear armed forces (such as the integration of the *Strategic Missile Forces*, the *Missile Space Forces* and the *Missile Space Defense Force* into a single branch or the creation of a unified combat control system to provide centralized and stable control over all elements of the integrated *Strategic Missile Forces*²⁶), a decade from now Russia probably will have less than 1,000 warheads in its strategic nuclear arsenal as the result of the economic situation and its scarce financial resources. Even the core of its strategic nuclear deterrence forces, the *Strategic Missile Forces*, thus will shrink dramatically in the years ahead.²⁷ According to *Aleksei G. Arbatov* in 1998, with the implementation of *START-II*, Russia will not have more than 1,200-1,500 warheads in 2003 (the timetable for the implementation of *START-I* has been extended to the end of 2007) because it is unable to deploy 700-1,000 additional warheads and SS-25 missiles at a rate of 100-200 per year.²⁸ At the same time, however, thousands of strategic and tactical nuclear warheads are still waiting in storage's for their dismantling. At present, Russia has neither the financial resources to maintain a nuclear arsenal equivalent to that of the United States nor sufficient funds for dismantling all the nuclear warheads of the Cold War. Even the ratified *START-I* agreement has only 40 per cent

²⁴ To those proposals see Bruce Blair, 'Global Zero Alert for Nuclear Forces' and idem., 'Command, Control, and Warning for Virtual Arsenals', in: Michael J. Mazarr (Ed.), 'Nuclear Weapons in a Transformed World. The Challenge of Virtual Nuclear Arsenals' (New York: St. Martin's Press, 1997), pp.55-75, here pp. 62 ff.

²⁵ To the confusing statement (as one of many others by *Yeltsin*) see the reaction in the Russian press by Dmitrii Gornostaev, *Nezavisimaya gazeta* (NG), 29 May 1997, pp.1-2 and Pavel Felgenhauer, *Segodnya*, 28 May 1997, p. 3.

²⁶ See Ilshat Maichurin/N. Poroskov, *Krasnaya Zvezda*, 5 November 1997, p. 1.

²⁷ See also analyses by the Russian General Staff, reported by Dmitriy Gornostaev/Andrei Korbut, NG, 4 December 1997, pp.1-2 and Yevgeni Fedorov, *Kommersant*, 20 January 1998, pp. 23-26.

²⁸ See Aleksei Arbatov, 'Military Reform in Russia. Dilemmas, Obstacles, and Prospects', *International Security*, Spring 1998, pp. 83-134, here p. 116 f.

been funded by Russia's federal budget while the present restricted modernization efforts of its nuclear forces will take up already 28 per cent of the defense budget.²⁹ According to Russian data, up to 80-90 percent of all military expenditures of the defense budgets in the 1990s were spent on strategic weapons branches, primarily the *RVSN*, which *Marshal Igor Sergeev* commanded before he became Defense Minister.³⁰ Therewith, Russia has tried to keep purchasing at least 20-30 ICBMs a year — but more than all other nuclear powers altogether — to maintain its nuclear super power status into the 21st century.³¹

Moreover, other important tasks such as improving reliability and safe nuclear weapon use or Russia's missile early warning capabilities (which are in a poor state and only capable to maintain coverage for 21 hours a day) have not received the much needed attention.³² In this regard, the creation of joint missile attack reciprocal notification and warning centers in Russia and the U.S., as it has already been agreed, is of utmost importance for the survival of Russia's *Strategic Nuclear Forces* rather than being merely downgraded to just a "*Confidence and Security Building Measure (CSBM)*".

Russia's refusal to ratify *START-II* is in the light of the financial implications of the treaty on its future *Strategic Nuclear Forces* to some extent understandable, but ultimately urgently necessary for its entire armed forces: politically important for a reliable security-policy in the future; economically as a cornerstone for the future budget planning as a pre-condition for any military reforms; and militarily important simply to the fact that Russia needs *START-II* more than the U.S. does: the expiration date for Russia's strategic missile arsenal will have been reached by 2007-2008, while it will be for the U.S. only in 2020-2025; according to Russian sources, in 2008-2010, the U.S. maximum number of warheads might be four to six times greater than Russia's (which will have great difficulties sustaining even 1,000 strategic nuclear warheads) whilst the combined nuclear potential of France and Great Britain may exceed Russia by 2010-

²⁹ See Interfax, 28 September 1999.

³⁰ See Oleg Odnokolenko, *Segodnya*, 23 September 1999, p. 1.

³¹ See Pavel Felgenhauer, *Moscow Times*, 20 July 2000.

³² To the problems and challenges of Russia's early warning systems, but denying that Russia is becoming partially blind, see the interview with RVSN Commander-in-Chief, Vladimir Yakovlev, in: *Nezavisimoe Voennoe Obozrenie-NG (NVO)*, No. 32, 20-26 August 1999, pp.1 and 6.

2015.³³ That explains Russia's interest to reduce the strategic nuclear arsenal of each side in forthcoming *START-III* negotiations even further to 1,000 or 1,500 warheads than the U.S. side is proposing (2,500-2,000 warheads). Nonetheless, Russia's refusal to ratify *START-II* during the last years was another indicator for Russia's traditional superpower mentality, which remains deeply rooted and entrenched as part of the "*patriotic consensus*" especially in the communist and nationalistic circles in the *Duma*.

Moreover, with the ratification of *START-I* and *-II* and the financial pressure to downsize Russia's strategic nuclear arsenal, a radical restructuring is under way with the result that most of Russia's strategic nuclear warheads in the future will be based on mobile-*ICBMs* and *SLBMs*. Although these nuclear weapon systems will strengthen the nuclear deterrence effect (because they are more invulnerable than silo-based *ICBMs*), simultaneously it risks to further weaken Russia's command and control safeguard system (because safeguards on mobile-*ICBMs* and *SLBMs* on submarines are inferior to those on silo-based *ICBMs* given communication problems and their vulnerable links).³⁴

Furthermore, Russia needs urgently its limited procurement budget for concentrating on critical systems and upgrades of the *C³I* structure. Russia's *Strategic Nuclear Forces* are becoming more and more blind as aging surveillance satellites and radar system need replacement. With a decaying early warning system, the danger of false alarms is growing during a time, when Russia's declining *Strategic Nuclear Forces* remain poised on hair-trigger alert, ready to fire at a moment's notice (launch-on-warning).³⁵ Russia relies more than ever on using its strategic nuclear weapon systems first or launching them on warning of hostile missile attack. As *Bruce Blair* has repeatedly argued: Russia's "*growing reliance [on nuclear weapons] has not only lowered the nuclear threshold for intentional use but also increased the danger of mistaken or unauthorized use of nuclear weapons.*"³⁶ That was already the case in January 1995 when a

³³ See 'US 'Not Interested' in Russia's Ratifying START II', Interfax (Moscow), 23 August 1999. To a balanced analysis by Russian experts see Vladimir Bogomolov/Sergei Kortunov, 'Russian Nuclear Strategy', *International Affairs* (Moscow) 2/1998, pp. 23-37.

³⁴ See Bruce Blair, 'Command, Control, and Warning for Virtual Arsenals', here p. 61.

³⁵ Russian specialists in control of the "*Kazbek*" system for the country's nuclear weapons have warned that the system needs urgently repair, but there are no funds available – see Kirill Belyaninov, *Noviye Izvestia*, 2 July 1999, pp. 1 and 7.

³⁶ Bruce Blair/Clifford Gaddy, 'Russia's Aging War Machine. Economic Weakness and the Nuclear Threat', *Brooking Reviews*, Summer 1999, pp. 10-13, here p. 12.

Norwegian weather rocket started and inadvertently alarmed Russia's *Strategic Nuclear Forces*. For the very first time since the Cold War, it triggered a heightened level of alert throughout its nuclear forces, including for the activation of the nuclear briefcase by President *Boris Yeltsin*.³⁷ The Russian Defense Ministry hopes now with another draft law on the problems of the space complex, entitled "*On Funding the Strategic Nuclear Forces of the Russian Federation until 2010*", to improve its space missile defense capabilities (including early warning means). By 2010, the military assumes to have restored the combat potential of its *Strategic Nuclear Forces*.³⁸

As the infighting between Defense Minister *Igor Sergeev* and the Chief of the General Staff, *Anatoly Kvashnin* has demonstrated over the last 18 months³⁹, considerable disagreements exist about the future direction and concrete steps of Russia's military reform. As long as Russia's economic decay is continuing, Russia's armed forces are largely unable to play a powerful and lasting role in its foreign and security policies any longer. Even the Ministry's own, most optimistic projections, only see it beginning to receive adequate funding in 2004. After the financial crisis broke out in August 1998, even those calculations are no longer realistic. The virtual collapse of Russian state finances since that time has made any effective military reform even more doubtful.⁴⁰ As the result of the domestic uncertainties, for the first time since 1991, details of the 1999 defense budget were classified again.⁴¹ At the same time, Russia has nevertheless ambitious rearmament plans as the report of the General Staff at Russia's Defense Ministry, entitled "*Prognosis for Financial and Economic Support of Military Construction until 2010*"⁴², from early 1999 (before the outbreak of the *Kosovo* war) is indicating. If the Russian government will confirm this blueprint, military expenditures would rise from 2.6 per cent of Russia's *GDP* to between 6.0 and 6.5 per cent by 2005.⁴³

³⁷ To details of that crisis see F.Umbach, 'Nuclear Proliferation Modernization and Proliferation Challenges', here p. 77 f.

³⁸ This document is to some extent unique because it is the first time that funding for a military program has become the subject of a federal law - see also Vladimir Yermolin, *Izvestiya*, 17 June 1999, p. 2.

³⁹ To the background see also Vladimir Ivanov, *NG*, 2 October 1999, p. 11.

⁴⁰ See also F.Umbach, 'Russia as a 'Virtual Great Power': Implications for Its Declining Role in European and Eurasian Security', *European Security*, No. 3, Autumn 2000, pp. 87-122, here pp. 97 ff.

⁴¹ See IISS (Ed.), 'The Military Balance 1999-2000' (Oxford-New York: Oxford University Press, 1999), pp. 104-118, here p. 108 ff.

⁴² See *NVO*, 5-11 February 1999.

⁴³ See also Richard F. Staar, 'A Russian Rearmament Wish List', *Orbis*, Fall 1999, pp. 605-612, here p. 606.

While the official overall strength has been reduced to 1.2 million by January 1, 1999, and most recently to not more than 850,000 soldiers of Russia's regular armed forces, today only about one third or even one fourth of that strength can be considered genuinely operational. Without the political will to make drastic cuts, Moscow will instead maintain a largely non-operational military machine that will even deepen the severe structural weaknesses of the Russian armed forces dating back to Soviet times.⁴⁴ Given the available budget, a further reduction of the regular armed forces to some 600,000 will be necessary at the beginning of the next decade.⁴⁵ Although the adopted common policy guidelines on military issues of the "*National Security Concept*" of December 1997 stated that, even if all of Russia armed forces (including those not belong to the Defense Ministry) are mobilized, Russia can cope with at best just one regional conflict. And even that case has become more and more doubtful during the last two years.

3.2 The Nuclearization Tendencies in Russia's Security and Defense Policies

Russia already dropped the pledge on its 1982 "*no-first use*"-policy of nuclear weapons in the document "*Principle Guidance on the Military Doctrine of the Russian Federation*" in November 1993.⁴⁶ At that time, it has already underlined the increasing role of Russia's strategic and tactical nuclear weapons in its defense policies.⁴⁷ Since the beginning of the 1990s and in the light of the Gulf-war, many Russian security and defense experts advocate have placed a greater reliance on nuclear weapons to compensate for the deficiencies of conventional forces. Not only strategic nuclear weapons, but also tactical nuclear weapons play a much more important role presently in Russia's defense posture, and particularly in the Far East towards China. *Aleksei Arbatov*, for instance, has argued in 1997:

⁴⁴ To the prospects of Russia's military reform see in particular Aleksei G. Arbatov, 'Voennaya reforma: doktrina, voiska, finansy', *Mirovaya ekonomika i mezhdunarodnye otnosheniya* (MEiMO) 4/1997, pp. 5-21 and idem, 'Military Reform in Russia'.

⁴⁵ See also Segodnya, 14 February 1998.

⁴⁶ The document in: *Izvestiya*, 18 November 1993, pp. 1-4. It has modified the 1982 Soviet pledge not to use nuclear weapons against non-nuclear states (as a denuclearized Ukraine) - see also Dunbar Lockwood, 'Russia Revises Nuclear Policy, Ends Soviet 'No-First-Use' Pledge', *ACT*, December 1993, p.19. The Russian Minister of Defence, Army-General *Pavel Grachev*, declared it already in an article four months earlier, see *Krasnaya zvezda*, 9 June 1995, pp. 1 and 5.

⁴⁷ See, inter alia, Vladimir Belous, 'Key Aspects of the Russian Nuclear Strategy', *Security Dialogue* 2/1997, pp. 159-171 and Nikolai Sokov, 'Russia's Approach to Nuclear Weapons', *The Washington Quarterly* 3/1996, pp. 107-114.

"Chinese conventional build up greatly depends on massive imports of weapons and technology from Russia. Thus, besides the nuclear threat, Moscow has effective means of undercutting or at least seriously slowing down the emergence of this hypothetical threat. At a minimum, to deter effectively China's conventional offensive superiority at the theatre, Russia might rely on the option of employing tactical nuclear weapons in the border area to thwart the enemy's offensive operations while deterring China's nuclear response at the strategic level by superior (assured destruction) strategic retaliatory capabilities. Then Russia's deterrence would be credible: its nuclear capabilities would be sufficient to deny China's alleged military gains at the theatre but not threatening to its national survival and thus would not provoke its strategic nuclear pre-emption."⁴⁸

The new emphasis on the role of nuclear weapons has also been confirmed in Russia's "*National Security Concept*"⁴⁹, signed by President *Boris Yeltsin* on December 17, 1997, and in new military doctrine and strategy proposals since that time. It suggests an overwhelming reliance on nuclear forces of a host of military-political contingencies (including the right to use them as first strike and sometimes even for the preemptive use in ethno-political conflicts) that these forces cannot realistically and effectively confront.⁵⁰ Characteristically for the increasing role of strategic and tactical nuclear weapons — which mostly (at least 6,000 operational warheads plus thousands in storage) have not been destroyed as former President *Mikhail Gorbachev* had pledged in October 1991 (an reiterated by *Boris Yeltsin* in 1992) — in Russia's military planning is also the fact that the current restructuring of Russia's armed forces has been conducted under the slogan "*military reform under the nuclear missile umbrella*."⁵¹ In this light, Russia places too much emphasis on nuclear scenarios (which are mostly unrealistic and do not solve any of its most important security problems at its southern flank) in order to justify its declining world power status without having the means to control them effectively.

Russia's foremost security perception and the resulting commitment to prepare forces able to fight low-intensity conflicts at home (especially at its southern flank) — as it has been outlined in the old *National Security Concept* of 1997 — has been replaced by a continued determination to maintain a modern nuclear capability which serves Russia's status as a nuclear world power (i.e. in the UN-Security Council) as well as deterrence

⁴⁸ Aleksei G. Arbatov, 'Virtual Arsenals', in: Michael J. Mazarr (Ed.), *Nuclear Weapons in a Transformed World*, pp. 319-336, here p. 331.

⁴⁹ See 'Kontseptsiya natsional'noi bezopasnosti Rossiiskoi Federatsii', *Rossiyskaya Gazeta*, 26 December 1997, pp. 4-5.

⁵⁰ See also Aleksei G. Arbatov, 'Voennaya reforma: doktrina, voiska, finansy', here p. 8.

⁵¹ Pavel Felgengauer, *Segodnya*, 23 October 1997, p. 1.

functions vis-à-vis superior conventional armed forces of NATO in Europe and China in East Asia. Moreover, nuclear weapons designer, confronted with the fact that their country can no longer afford such as vast nuclear weapon archipelago like in Soviet times, are lobbying presently together with General Staff officers to build a new generation of low-yield tactical nuclear weapons for use on a battlefield, which is seen as Moscow's answer to its lack of high-precision-conventional weapon systems.⁵²

But given Russia's economic and financial constraints, a further modernization of its *Strategic Nuclear Forces* and tactical nuclear arsenal thus would deepen the underlying problem that it would come at the further expense of its conventional forces. It would result in a continued degradation of morale and operational effectiveness in times, when Russia will have to cope with a lasting extreme violent ethnic conflict in the Northern Caucasus — a conflict with no peaceful solution in sight at all in the foreseeable future.

But as the second *Chechen* war as Russia's worst security crisis now demonstrates once again, its main security challenge has much more to do with low-intensity conflicts than with a "virtual NATO threat" or a nuclear preemptive strike of the U.S. strategic nuclear forces. Neither strategic not tactical nuclear weapons will help Russia to deter and fight those conflicts. Thus Russia may have a credible nuclear deterrent but it is increasingly becoming vulnerable to attack by a well-trained guerrilla armies such as in the North Caucasus.⁵³

But newly discussed plans to develop a new generation of nuclear munitions with low-yield and super-low-yield, obviously delivered to targets by both strategic and tactical delivery systems (such as the newly developed *Iskander* 400 km short-range missile system), the nuclear part of the pompous *Zapad-99* exercise in the "Western Theater of Operations" in June 1999 (the biggest and most costly exercise since 1985! and directed against a NATO-aggression "preceded by a powerful information warfare" in North and Central Europe) as well as the seriously debated use of nuclear (and chemical) weapons in the current war in Dagestan/Chechnya seem all to confirm that Moscow priorities tend rather toward a further "nuclearization of Russia's defense

⁵² See Pavel Felgengauer, *Segodnya*, 6 May 1999, pp. 1-2 and David Hoffman, *IHT*, 1 September 1999.

⁵³ See also Vadim Soloviov, *NG*, 8 May 1999, pp. 1 and 3.

policy".⁵⁴ As Russian defense experts have discussed, it could be the Russian answer to its lack of high-precision non-nuclear weapon systems (used by NATO during the *Kosovo* war), which are defined by Russian defense experts as "*strategic deterrence weapons*" and the new "*God of War*".⁵⁵ But whether these new nuclear weapons can really be used effectively and justified politically in any low-intensity conflicts is more than doubtful. These non-nuclear strategic weapons systems might have militarily some positive deterrent effects, but have also many negative implications, in particular if one takes into account the increasing asymmetrical conventional military balance for Russia:

"Within the context of deterrence of major non-nuclear aggression using nuclear weapons (in the presence of an asymmetry of conventional forces): The threshold of nuclear weapon use is determined by the level of potential of conventional forces with respect to enemy potential, and so a high asymmetry of conventional forces lowers the threshold of nuclear weapons use and elevates the danger of use of nuclear weapons even in low-level conflicts."⁵⁶

While President *Boris Yeltsin* chaired a "*super secret session*" of the Kremlin *Security Council* in April 1999 that discussed this issue, so far nothing has been made public. The *Security Council*, however, had already approved in July 1998 the structure of Russia's nuclear deterrence forces until 2010. In December 1998, finally, new major provisions of Russia's nuclear deterrence policy had been adopted. The concept has been called "*Main Policy Guidelines of the Russian Federation in the Area of Nuclear Deterrence*" and has been set forth on March 15, 1999 by Deputy Secretary of the Security Council *Viktor Mikhailov*.⁵⁷ But the concept itself has not been published. Nonetheless, it became clear what has been discussed in general. As *Alexander Golts* lamented, the West knew "*that Moscow is not going to push the nuclear button because of Yugoslavia*". Therefore, the session in April 1999 was dedicated to the discussion of non-strategic or tactical nuclear weapons because "*the threat of a global nuclear*

⁵⁴ To these plans see 'Letter of June 1999. Security Council Meeting: What Is Under the Veil of Secrecy?', PIR Arms Control Letters, Moscow, 9 June 1999 (via Internet: <http://pircenter.org/acl/messages/65.html>); Richard Paddock, Los Angeles Times, 14 September 1999 and Zbigniew Brzezinski, Frankfurter Allgemeine Zeitung (FAZ), 10 November 1999, p. 10.

⁵⁵ See also David Hoffmann, Washington Post, 31 August 1999, p. A1.

⁵⁶ Yevgeniy A. Fedosov/Igor D. Spasskiy, NVO, July 23-29, 1999, p. 6.

⁵⁷ See 'Letter of June 1999. Security Council Meeting: What Is Under the Veil of Secrecy?'.

catastrophe failed to impress NATO, but the specter of a limited [nuclear] war may just do the trick."⁵⁸

Many Russian security and defense experts advocate a greater reliance on tactical nuclear weapons to compensate for the deficiencies of its conventional forces. Not only strategic nuclear weapons, but also tactical nuclear weapons play a much more important role in Russia's defense posture, and particularly in the Far East towards China. As *Dmitri Trenin* has confirmed: "*Some Russian military officers privately admit in a conflict with China the main Russian defenses along the border, including all the principal cities, will be overrun in a matter of days, leaving the General Staff with few options other than going nuclear.*"⁵⁹ According to *James Clay Moltz* in 1997, approximately 1,259 Russian nuclear warheads were still based in the region, deployed on air-launched cruise-missiles, land-based missiles, and *SLBMs*.⁶⁰

But even a nuclear deterrence against China might become more questionable over the next decade, given Russia's great difficulties sustaining even 900 strategic nuclear warheads after 2008-2010. Although China has currently only some 300 strategic nuclear warheads and additional 150 tactical nuclear warheads, it could theoretically expand its nuclear forces (by acquiring and implementing the *MIRV* technology) two or three times of its present size to some 600-900 strategic nuclear warheads within the next decade (see also the following chapter about China's nuclear modernization efforts). It seems also to have an interest to modernize and increase its arsenal of tactical nuclear weapons.⁶¹ If China will indeed expand its strategic and tactical nuclear arsenals, Russia's nuclear deterrence would become automatically more questionable, particularly when it is part of an evolving concept of limited nuclear deterrence that links conventional and nuclear warfare.

Furthermore, even nowadays the use of Russia's present tactical nuclear arsenal is very questionable because of the vicinity of almost all major Russian cities and military

⁵⁸ Alexander Golts, *Itogi*, No. 20, 18 May 1999, pp. 28-29. See also Vladimir Georgiev, *NG*, 12 May 1999, p. 2.

⁵⁹ Dmitri Trenin, 'Russian Chinese Relations: A Study in Contemporary Geopolitics', in: Erich Reiter (Ed.), 'Jahrbuch für internationale Sicherheitspolitik' (Verlag E.S.Mittler & Sohn GmbH: Hamburg-Berlin-Bonn 2000), pp. 913-927, here p. 917.

⁶⁰ See James Clay Moltz, 'Missile Proliferation in East Asia: Arms Control vs. TMD Responses', *The Nonproliferation Review*, Spring-Summer 1997, pp. 63-71, here p. 64.

⁶¹ See *ibid.*, here p. 106.

headquarters to the common border with China.⁶² They were already in the past, during the 1960s and the times of a potential military conflict between China and Russia, very vulnerable to a massive large-scale surprise attack by the *PLA* as many Russian military experts concluded. The use of non-strategic nuclear forces is only deterrent when Moscow would use longer-range tactical nuclear weapons that threaten China's *hinterland* and major cities but not along the common border. Recognizing these defense dilemmas at its potential eastern front, Russia seems to develop a new generation of tactical nuclear weapons and munitions with low-yield and super-low-yield, obviously delivered to targets by both strategic and tactical delivery systems such as the newly developed *Iskander* 400 km short-range missile system. In 1999, Russia conducted seven subcritical tests on *Novaya Zemlya* and will continue to do it even more until the end of this year.⁶³

Hence, reliance on the nuclear factor and umbrella do not necessarily guarantee Russia's national security under all circumstances, including vis-à-vis potential threats by China. *Andrei Piontkovsky*, director of the *Center for National Security Research*, and *Vitaly Tsigichko*, a wellknown and leading security specialist of the *System Analysis of the Russian Academy of Sciences*, have warned and criticized the new military doctrine in May 2000 as follows:

"As far as the Far Eastern sector is concerned, we are following a very strange tradition to avoid an analysis of the capabilities of the Russian and Chinese armed forces. ... Such analysis is a necessary element for creating a system of stability. Considering Russia and China, one reaches the conclusion that it is a classical case, when the superiority in ordinary weapons (China) can be deterred by the threat of nuclear weapons.

But this analysis does not take in consideration such parameter as 'inadmissible damage'. ... Considering the potential Russian-Chinese conflict from this point of view, we will have to give up the idea that a threat of nuclear weapons can frighten the enemy. If we come into conflict with China, it has a good chance of winning, except in one instance: a total nuclear war, which would destroy both sides.

The Russian conception, which relies on the nuclear factor, is not a guarantee of the country's security. This conception is ineffective in all aspects as regards possible conflicts."⁶⁴

⁶² See F.Umbach, 'Russia's Strategic and Military Interests in North and South East Asia', in: Michael H. Crutcher (Ed.), 'The Russian Armed Forces at the Dawn of the Millenium' (Carlisle Barracks, P.A.: Center for Strategic Leadership/U.S. Army War College, December 2000), pp. 261-321, here p. 287.

⁶³ See Andrey Korolev, 'Nuclear Test Range in Arctic to be Used Intensively', *Bellona*, 1 June 2000 (via Internet: www.bellona.no/imaker?id=16950&sub=1).

⁶⁴ Andrei Piontkovsky/Vitaly Tsigichko, *Segodnya*, 31 May 2000, p. 4.

Russia's willingness to trade long-term strategic interests for short-term commercial benefits might backfire on Russia itself because the relative weakness of Russia and the increasing power of China will become clearer in the next decades. If Russia will not economically revive with a substantial growth in the next decade (which seems rather unlikely⁶⁵), it will not have the financial resources to modernize and rebuild its armed forces – an expectation and intention which today are used to justify its present high-tech arms exports and military-technology transfers to China. Russia's technological superiority over "*backward China*", historically an important leverage of and reassurance for Moscow's foreign policies in Asia, is now becoming history - and much faster than Russia's political and military elite seems to realize. In this regard, history seems not to offer any lessons for Russia. The Soviet assistance to China in developing its own nuclear weapons, for instance, has saved Beijing between 10-15 years.⁶⁶ All these strategic developments under way have already dramatically reversed the geopolitical dynamics of Eurasia as a whole with wide-ranging implications not only for both countries, but also for regional and global affairs. Historically, it would not be the first time that *Moscow* and even the Russian military high command have underestimated China's modernization progress of its nuclear and conventional armed forces.

Nonetheless, Russia's reliance on the increasing role of Russia's strategic and tactical nuclear weapons in its defense policies has recently been confirmed by Russia's new "*National Security Concept*" of January 2000⁶⁷ and its new military doctrine of April 2000.⁶⁸ The latter document states that Russia must have a potential for nuclear deterrence ensuring "*the infliction of required damage to any aggressor, either state or a coalition, under any circumstances.*"⁶⁹ Although the final version of the doctrine doesn't mention directly Russia's right to the first use of nuclear weapons, the document makes clear that "*the Russian Federation keeps the right to use nuclear weapons in response to the use of nuclear arms and other WMD against it or its allies, and in response to a*

⁶⁵ See also F. Umbach, 'Russia as a 'Virtual Great Power'.

⁶⁶ See Roland Timerbaev, 'How the Soviet Union Helped China to Develop the A-Bomb', *Yaderny Kontrol*, No. 3 (May-June 1998), p. 79.

⁶⁷ See *Izvestiya*, 18 January 2000.

⁶⁸ See NG, 22 April 2000 and *Izvestiya*, 25 April 2000.

⁶⁹ *Ibid.*

large-scale aggression with the use of conventional arms in situations critical for the national security of the Russian Federation."⁷⁰ Furthermore, as the doctrine demands:

"Under present-day conditions the Russian Federation proceeds on the basis of the need to have a nuclear potential capable of guaranteeing a set level of damage to any aggressor (state or coalition of states) under any circumstances. ...

The Russian Federation Armed Forces and other troops should be prepared to repulse aggression, effectively engage an aggressor, and conduct active operations (both defence and offensive) under any scenario for the unleashing and waging wars and armed conflicts, under conditions of the massive use by the enemy of modern and advanced combat weapons, including weapons of mass destruction of all types."⁷¹

However, the vagueness of the phrase "*critical situations*" to national security enables Moscow *de facto* to interpret it relatively freely (though the draft version of the military doctrine, published in October 1999, was even more ambiguous in this regard), as critical Russian military experts have concluded.⁷²

3.3 A Strategic Alliance Between Russia and China in Regard to NMD and TMD?

At the same time, the Russian-Chinese relationship have undergone a remarkable transformation during the last decade, including a congruence of strategic agendas, accompanied by congruence in strategic cultures: China supported Moscow's opposition to NATO's eastward expansion; Moscow supported China's opposition to the 1996 revised U.S.-Japan Security Alliance and its guidelines for mutual defense cooperation.⁷³ Furthermore, Russia and China warned repeatedly in 1999 the U.S. to develop BMD and TMD umbrellas (the latter together with Japan and, possibly, Taiwan) which would threaten all nuclear and non-proliferation treaties (in particular ABM and CTBT).⁷⁴ However, both countries oppose — but to a different degree due to their specific national defense dilemmas — *Washington's* plans for a national and theater ballistic missile defense system. Thus Russia is much more concerned about a NMD rather than a TMD system. That explains *Putin's* proposal to build a joint TMD system

⁷⁰ Ibid.

⁷¹ Ibid., here pp. 5-6.

⁷² See, for instance, Oleg Odnokolenko, *Segodnya*, 22 April 2000, p. 2.

⁷³ See F.Umbach, 'Russia's Strategic and Military Interests in North and South East Asia'.

⁷⁴ See Dmitriy Gornostaev, *NG*, 10 December 1999, pp. 1 and 6, and Yuri Savenkov, *Izvestiya*, 8 December 1999, p. 4. To China's objection of TMD and adherence to the ABM-treaty see Frank Umbach, 'World Gets Wise to P'yongyang's Nuclear Blackmail – Part Two', here p. 37 f.

with the U.S. and Europe or even a joint NMD system with the U.S. which clearly is not in China's strategic interests. Russia's concerns towards a U.S. TMD system in East Asia is only related to potential impacts on China's defense policies because it might fuel (rather than just to stimulate) a faster modernization of its nuclear forces (which is already under way and started long before the U.S. TMD and NMD plans have been discussed since the mid of the 1990s), including to build *MIRV*-nuclear warheads.⁷⁵

Moreover, *Putin's* unilateral proposal to develop a joint missile defense system for Europe with NATO and the U.S. caught Beijing by surprise. It provoked Chinese comments to remind Moscow at the "*common interests of all countries*." Thereupon China declared to object "*any*" changes of the *ABM-treaty*, including from the Russian side.⁷⁶ In this light, the "*Joint Statement on ABM*", issued by both presidents during their Beijing summit in July 2000, seems an attempt of both sides to restore rather than to deepen their strategic relationship in regard to the U.S. missile defense plans and a revision of the ABM treaty.⁷⁷ Already before, during the Moscow visit of China's Defense Minister *Chi Haotian* in January 2000, Moscow had to reassure China by confirming "*unconditional adherence to all agreements reached during earlier summits*."⁷⁸

4. China's Nuclear Modernization Efforts and Its Ambiguous Non-Proliferation and Arms Control Policies

4.1 On the Way to Become a Nuclear Superpower? – The Evolution of China's Nuclear Force Development

Since the beginning of its nuclear weapon programs in the mid-1950s and the first nuclear weapon explosion on 16 October 1964, China has always given priority for developing and modernizing its nuclear arsenal. Two years later, it launched its first nuclear missile on 25 October 1966, and detonated its first hydrogen Bomb on 14 June

⁷⁵ To a Russian view of a U.S. TMD-system in East Asia see also Michail Timofeev, NG, 21 July 2000, p. 6.

⁷⁶ See also Yu Bin, 'New Century, New Face, and China's 'Putin Puzzle'', Comparative Connections, 1st Quarter 2000 and idem, 'Strategic Distancing ... or Else', *ibid.*, 2nd Quarter; 'Putin and Jiang Disconnect on the Telephone', Stratfor.Com (via Internet: www.stratfor.com/asia/commentary/0006090259), 9 June 2000.

⁷⁷ See 'Joint Statement on ABM Issue by the Presidents of the People's Republic of China and the Russian Federation', Stratfor.Com (via Internet: www.stratfor.com/asia/countries/china/RussiaChinaJointStmn.htm), 18 July 2000 and 'Beijing Declaration by the People's Republic of China and the Russian Federation', *ibid.* (via Internet: www.stratfor.com/asia/countries/china/BeijingDeclaration.htm), 18 July 2000.

⁷⁸ See Alexander Shaburkin, NG, 19 January 2000, p. 2.

1967. Today, the number of nuclear weapons is still one of the most closely guarded secrets in China's security policy. In the Chinese view, transparency is not in the interest of militarily "weak" or medium-sized nuclear states (in comparison to nuclear superpowers). According to most of the Western sources, China has currently not more than 300 deployed nuclear warheads — which is ten times less than the strategic nuclear arsenals of the United States and Russia after the ratification of *START-II* — on some 70-100 intermediate-range ballistic missiles (*IRBMs*) and about 120 medium-range bombers (*Tu-16 'Badger'*).⁷⁹ Although China, too, has build up a nuclear triad, most of the nuclear warheads are deployed on *IRBMs* and *ICBMs*. Most of China's ballistic missiles have a range of not more than 3,000 km, 20 have a range of 4,800 km and probably not more than seven *ICBMs* are believed to have a range of roughly 13,000 km and therewith the capability to reach the U.S. territory beyond the west coast. In addition, estimations suggest another stored 150 ground-launched tactical warheads.⁸⁰

Given the facts that the PLA is confronted with a technology lag of 20 years behind the West⁸¹, China's missiles are believed to be far less accurate and thereby are still lacking the capability to deliver multiple warheads to separate targets (*MIRV*). The first and second-generation of research and development stages to deployment of Chinese nuclear weapons took around 11 years. The next stage to deploy the third generation of Chinese nuclear weapons might take even longer, but at the end will certainly narrow the technology lag to the West.

⁷⁹ See SIPRI (Ed.), 'Yearbook 1996: Armaments, Disarmament and International Security' (Oxford: Oxford University Press, 1996), p. 619; Leonhard S. Spector/Mark G. McDonough/Evan S. Medeiros, 'Tracking Nuclear Proliferation', here pp. 49 ff.; The Defence Agency of Japan (Ed.), 'Defence of Japan. White Paper' (Tokyo: Defence Agency/Japan Times, Ltd., July 1995), here p. 52 and 'Chinese Nuclear and Conventional Forces 1993', ACT, December 1993, p. 29. IISS (Ed.), 'The Military Balance 1996/97' (London/IISS: Oxford University Press, October 1996) numbers Chinese *IRBMs* on 70+ systems. However, some estimates are much higher — see 'Size of China's Ballistic Missile Force', Center for Defense and International Studies, via Internet: <http://www.cdiss.org/chinabms.htm>.

⁸⁰ See Robert S. Norris/Andrew S. Burrows/Richard W. Fieldhouse, 'Nuclear Weapons Databook, Volume V: British, French and Chinese Nuclear Weapons' (Boulder, CO: Westview Press, 1994), p. 358 and Table 1.7, p. 11.

⁸¹ See also RIPS (Ed.), 'Asian Security Survey 1995-96' (London-Washington: Brassey's, 1996), here p. 23.

Table: China's Strategic Nuclear Ballistic Missiles (ICBMs/SLBMs⁸²: < 5,500km)

Type/ Name	Range (km)	Payload (kg)	Number	CEP (m)	Fuel	Additional Comments
DF-5A (1981)	13,000+	3,200	18-26	-	Liquid	liquid-silo based ICBM; modification with an 8 MIRV-warheads feasible
DF-31 (2002-05)	8,000	700	0	-	Solid	Road-Mobile ICBM with MIRV-warheads; tested in August 1999 and November 2000; likely deployment by 2002-2005
DF-41 (2005-10)	12,000	800	0	-	Solid	Mobile-based ICBM with MIRV-warheads; will replace DF-5; likely deployment between 2005-2010
Julang-2 (2005 ff.)	8,000	700	0	-	Solid	Solid-fuel SLBM, based on the DF-31; likely deployment not before 2005

Sources: Wyn Bowen/Stamley Shepard, 'Living under the Red Missile Threat', JIR, December 1996, pp. 560-564, here p.563; and 'British, French, and Chinese Nuclear Forces', The Bulletin of the Atomic Scientists, November/December 1996, pp. 64-67, here p. 67; Richard D. Fisher, 'China Increases Its Missile Forces While Opposing U.S. Missile Defense', Background, The Heritage Foundation, No. 1268, 7 April 1999; Richard D. Fisher/Baker Spring, 'China's Nuclear and Missile Espionage Heightens the Need for Missile Defense', *ibid*, No. 1303, 2 July 1999 and David M. Lampton/Gregory C. May, 'A Big Power Agenda for East Asia: America, China, and Japan' (Washington D.C.: The Nixon Center, December 2000, here pp. 22 and 81).

The question is only to which extent. But ultimately neither the transition phase nor the final stage of China's ambitious modernization programs for its conventional and nuclear armed forces are reassuring for Beijing's neighbors.

China's nuclear strategy is currently still based *de facto* on a "counter city" second-strike capability.⁸³ But its future nuclear strategy might rather be based on a "flexible response" and "limited deterrence" posture similar to NATO's in the 1980s according to convincing Western analysis. According to Chinese advocates of a "flexible response" and "limited deterrence" strategy, the *Clausewitz* dictum that warfare is the continuation of politics exaggerates the uncontrollability of nuclear war and is leading to undermine

⁸² Ranges according IISS; Chinese definitions: short-range (< 1.000 km); medium-range (1.000-3.000 km); long-range (3.000-8000 km); intercontinental-range (< 8.000 km).

⁸³ See D. Lockwood, 'The Status of U.S., Russian and Chinese Nuclear Forces in Northeast Asia', here p. 23.

the credibility of China's deterrence policy.⁸⁴ Internal discussions of nuclear strategy have indicated China's doctrine shifts since 1985 from an early, large scale and all-encompassing "*people's war*", based on an attrition strategy, to local and limited wars under high-tech conditions around China's periphery. According to U.S. experts like *Alastair Iain Johnston*, those doctrine shifts have also led to an evolving concept of limited nuclear deterrence⁸⁵, resting on a limited war-fighting capability and denying the adversary any victory in a nuclear war.⁸⁶ Such a limited deterrence doctrine requires the development of a greater number of tactical, theater, and strategic nuclear weapons with improved accuracy to target nuclear forces in addition to cities. In the view of Chinese experts, however, China's modernization program of its nuclear weaponry has rather "*limited aims*" whilst Western experts exaggerate the importance and the influence of the "*limited deterrence*" school in the *PLA* for the decision-making processes of the nuclear modernization programs.⁸⁷

China's ambitious modernization programs of its nuclear forces, including of its *IRBMs* "*to provide strategic dominance over East Asia*" (*Richard Fisher*⁸⁸), are another proof of the shifts because they seem mainly proactively doctrine-driven (a departure from the *PLA's* past rather reactive practice). They demand changes in the *PLA's* force structure, strategy and concepts of operation. Despite facing tremendous problems in modernizing its armed forces which is hampered by insufficient funds and the low level of its military technology base, numerous development programs of its nuclear forces are under way. In contrast to the United States and Russia, the modernization and expansion of

⁸⁴ See Alastair Iain Johnston, 'China's New 'Old Thinking'', here p.13f., and id., 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', *The China Journal*, June 1996, pp.548-576.

⁸⁵ Chinese strategists explicitly distinguish "*limited nuclear deterrence*" from "*minimum deterrence*". In the first term, nuclear weapons play a much greater (counterforce-) warfighting role in the deterrence of both conventional and nuclear wars, particularly in the context of escalation control and intra-war deterrence - see Alastair Iain Johnston, 'China's New 'Old Thinking'', pp. 12 and 19 f.

⁸⁶ To the Chinese military doctrine shifts since 1985 see Paul H. B. Godwin, 'From Continent to Periphery: PLA Doctrine, Strategy and Capabilities Towards 2000', *The China Quarterly*, June 1996, pp. 464-487; Nan Li, 'The PLA's Evolving Warfighting Doctrine, Strategy and Tactics, 1985-95: A Chinese Perspective', *ibid*, pp. 443-463, Yao Yunzhu, 'The Evolution of Military Doctrine of the Chinese PLA from 1985 to 1995', *The Korean Journal of Defense Analysis*, 2/1995, pp. 57-80 and David Shambaugh, 'The Insecurity of Security: The PLA's Evolving Doctrine and Threat Perceptions Towards 2000', *The Journal of Northeast Asian Studies*, No.1 (Spring) 1994, pp. 3-25.

⁸⁷ See Hongxun Hua, 'China's Strategic Missile Programs: Limited Aims, not 'Limited Deterrence'', *The Nonproliferation Review*, Winter 1998, pp. 60-68.

⁸⁸ Quoted following the article 'China Upgrades Medium-Range Missiles Targeting East Asia', *ADJ* 8/1997, p. 63.

China's nuclear and conventional armed forces had not been constrained by any international arms control regime until 1996. At the same time, uncertainty about these Chinese modernization programs and Beijing's long-term strategic intentions behind those military programs under way arise primarily from the lack of transparency in its military sphere. The ultimate speed of the modernization of China's nuclear forces remains thus unknown.

Nonetheless, the focus on improving the qualitative level of China's nuclear forces with the help of recruited former Soviet weapon scientists and engineers is directed toward a miniaturizing of warheads, better targeting accuracy, penetration and anti-electronic interference capability, modernizing its C²-networks, developing a *MIRV* capability as well as increasing the survivability and the camouflage of its nuclear forces such as storing them underground and deploying on mobile, land-based launchers or submarines.⁸⁹ China has already build its first satellite ground station with military implications outside China on *Kiribati's* main atoll *Tarawa*.⁹⁰ The PLA navy is currently working on a new advanced nuclear submarine which will carry 12 *SLBMs* and will be deployed in the next decade.

Table: Chinese Theater Ballistic Missiles (*SRBMs/IRBMs/SLBMs*: > 5,500km)

Type/ Name	Range (km)	Payload (kg)	Number	CEP (m)	Fuel	Additional Comments
DF-11/M-11	280-300	800-950	-	600	Solid	Road-Mobile; HE or nuclear warhead
DF-15/M-9	600	500	-	300	Solid	Road-mobile; separating HE or nuclear warhead
DF-21	1,800	600	30-50	-	Solid	Road-mobile; 2-stage; HE or nuclear Warhead; derived from JL-1
DF-25	1,800	2,000	-	-	Solid	Under development

⁸⁹ See also Yang Huan, 'China Strategic Nuclear Weapons', in: Michael Pillsbury (Ed.), 'Chinese Views of Future Warfare' (Washington D.C.: National Defence University Press, 1997), pp. 131-135, here p. 134 f.; 'China's Slow March', Carnegie Endowment-Non-Proliferation News and Resources (Internet: www.ceip.org/files/nonprolif/analysis121200china.asp); Dunbar Lockwood, 'The Status of U.S., Russian, and Chinese Nuclear Forces in Northeast Asia', pp. 332 ff.; Holly Porteous, 'China's View of Strategic Weapons', JIR, March 1996, pp. 134-136; in context see also Vipin Gupta, 'Assessment of the Chinese Nuclear Test Site Near Lop Nor', *ibid.*, August 1993, pp. 378-381 and Yan Kong, 'China's Nuclear Bureaucracy', *ibid.*, July 1993, pp. 320-326.

⁹⁰ See Bruce Gilley, 'Pacific Outpost', FEER, 30 April 1998, pp. 26-27 and JDW, 18 February 1998, p. 17.

DF-3A	2,800	2,150	50-150	1,000	Liquid	Transportable; 1-stage; HE or Nuclear warhead
DF-4	4,750	2,200	20	-	Liquid	Liquid/caves/rollout
JL-1	1,700	600	12-24	-	Solid	2-stage SLBM; nuclear warhead; deployed on one or two <i>Xia SSBNs</i>

Sources: Wyn Bowen/Stamley Shepard, 'Living under the Red Missile Threat', JIR, December 1996, pp. 560-564, here p. 563, and 'British, French, and Chinese Nuclear Forces', The Bulletin of the Atomic Scientists, November/December 1996, pp. 64-67, here p. 67.

As part of the program, this new type of a nuclear submarine will be equipped with a new *SLBM*, called *Jiulong-2* (*CCS-NX-4*), with a range of 8,000 km. It will allow Chinese submarines for the first time to target parts of the U.S. from areas located near the Chinese coast.⁹¹ Western experts anticipate that China will deploy 4-6 submarines, each armed with 12 *SLBMs*. That would add alone at least 48-72 warheads to China's nuclear arsenal, with even more, if China can succeed with its *MIRV* development (expanding the number of warheads on the *SLBMs* at least two or three times).⁹² A new mobile, solid-fuel *ICBM*, named *Dongfeng-31* (*DF-31*), had been tested by China at the end of May 1995 (few days after the indefinite extension of the *NPT*) and in August 1999 as well as in November 2000.⁹³ It also has a range of 8,000 km and can carry a payload of 200-300 Kt. The new *ICBM* is expected to be operable prior to the year 2000.⁹⁴ Another solid-fuel mobile *ICBM* (*DF-41*) under development will have a range of 12,000 km and is anticipated to become operational not before 2010.⁹⁵ Furthermore, China is also developing ground- and air-launched, land-attack cruise missiles, partly from versions of its turbojet powered *C-802* anti-ship missile. Reportedly, this cruise missile with a range of at least 120 km, carrying a payload of 165kg, will incorporate a highly accurate *Global Positioning System* (*GPS*) guidance system and a terrain

⁹¹ See also Nigel Holloway, 'Touchy Issue. China Gets Defensive on Missile Reductions', FEER, 23 October 1997, p. 29 f.

⁹² See Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation', here p. 562 f.

⁹³ See Bill Gertz, The Washington Times, 12 December 2000 (online-version) and Washington Post, 13 December 2000, p. A38 (online-version).

⁹⁴ See RIPS (Ed.), *Asian Survey Security 1995-96* (London-Washington: Brassey's, 1996), here p.29f. and Paul H. B. Godwin, 'Uncertainty, Insecurity and China's Military Power', Current History, September 1997, pp. 252-257, here p. 257.

contour-matching radar to improve the accuracy required to perform precision-strikes against high-value civilian and military targets such as command and control centers or government buildings in Taipei.⁹⁶ This and other future cruise missiles with their low altitudes will present a major detection challenge for future TMD radar and effective counter measures. A report to the U.S. Congress has warned in 1997: "*A missile fleet of this size could overwhelm any theater missile defense capability planned for this vital region and fundamentally alter regional calculations of the balance of power.*"⁹⁷

However, China presently still lacks an adequate limited nuclear war fighting posture with a satellite based early-warning (EW) capability and sufficient counter-force as well as counter-value tactical, theater and strategic nuclear forces to deter the escalation of conventional or nuclear war. But it is also clear that China is going to close this "*window of opportunity*" — the gap between its operational requirements of the limited deterrence strategy and its nuclear doctrine assumptions — for its perceived potential adversaries. It is the result of the logical conclusion of China's strategists that Beijing's deterrent is uncertain or even frail and with that not credible enough. It leads already to a greater Chinese interest in launch-on-warning or launch-under-early attack postures and hence preemptive nuclear strategies⁹⁸ that ultimately will undermine crisis stability.

With those nuclear weapon programs under development and the ultimate goal of the Chinese political-military elite to narrow the technological gap to the United States and Russia and to create a less vulnerable, more flexible, and more reliable strategic retaliatory force, Beijing pushed through four nuclear tests (such as on 15 May and 17 August 1995 as well as its last 44th and 45th tests on 8 June and on 29 July 1996) from 1995 to 1996. China ignored thereby any international or regional repercussions before

⁹⁵ See John Wilson Lewis/Hua Di, 'China's Ballistic Missile Programs. Technologies, Strategies, Goals', *International Security*, Fall 1992, pp. 5-40, here p. 11. A new source claimed that the *DF-41* development has been cancelled, but it is expected that a new program will start, though has not been announced — see 'China's Slow March', Carnegie Endowment. Other sources, however, believe that the *DF-41* program is continuing.

⁹⁶ See Wyn Bowen/Stanley Shepard, 'Living under the Red Missile Threat', here p. 561 and John Downing, 'China Develops Cruise Missiles', *Asia-Pacific Defence Reporter (A-PDR)*, August-September 1997, p. 6.

⁹⁷ Quoted following the article by Barbara Starr, 'China Could 'Overwhelm' Regional Missile Shield', *JDW*, 23 April 1997, p. 16.

⁹⁸ See Alastair Iain Johnston, 'China's New 'Old Thinking'', here p. 21 f.

finally it pledged a moratorium as a pre-condition of the *Comprehensive Test Ban Treaty (CTBT)*.⁹⁹

Table : China's Nuclear Arsenal vis-à-vis the Other Four Original Nuclear Weapon States

<i>Strategic Nuclear Weapons of the Original "Nuclear Five" (1999)</i>			
<i>Country</i>	<i>Suspected strategic nuclear weapons</i>	<i>Suspected non-strategic nuclear weapons</i>	<i>Suspected total nuclear weapons</i>
China	284	150	434
France	482	0	482
Russia	7,200	6,000-13,000	13,200-20,000
UK	100	100	200
USA	8,500	7,000	15,500

Source: Ehsan Ahrari, 'China Eyes NATO's Nuclear Doctrine', in: Jane's Intelligence Review (JIR), April 1999, p. 38 f., here p. 39.

While the assumption that China will be able to close the gap between the nuclear doctrine and its operational requirements as well as capabilities over the next decade remains uncertain, China's nuclear strength will nonetheless increase as the consequence of the international denuclearization between the nuclear superpowers United States and Russia. By implementing *START-II*, both arsenals will be downsized to 3-3,500 warheads. Consequently, the combined nuclear arsenal of both superpowers to Chinese strategic nuclear forces would fall from 70:1 to 7:1, or 3.5:1 compared with one of the nuclear superpowers (see the table above).¹⁰⁰ Forthcoming *START-III* negotiations between the U.S. and Russian side will further reduce their arsenals to expected 1,500-2,000 nuclear warheads on each side or even more (in the case of Russia) until the end of 2007. A Chinese nuclear arsenal of some 600-900 warheads in the future would then automatically not only raise China's global political prestige but also the scope of its regional nuclear and conventional military options in the Asia-Pacific region (including towards the United States). Moreover, one has to take into account that China has in contrast to the United States no security commitments requiring a credible extended deterrence posture that justifies high numbers of

⁹⁹ See Tony Walker/Frances Williams, FT, 30 July 1996, p.1 and TKH, 30 July 1996, p. 1.

¹⁰⁰ See Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', here p. 563.

warheads. However, it might help to explain another trend of China's discussions of military doctrine — the increasing linkage between the PLA's conventional and nuclear options.¹⁰¹ With a secure northern border towards Russia, China's military strategy has now shifted its attention from the more general peripheral defense of the country to concrete maritime defense in order to guarantee militarily its officially claimed economic zones and territorial sovereignty in the South China Sea and increased military options toward Taiwan.¹⁰² Against this background, China's increasing nuclear retaliatory capability might have primarily the function to prevent great power interference in local and limited conventional wars under high-tech conditions with small and medium powers such as those in the South China Sea. A credible nuclear deterrence option that guarantees nuclear escalation and its control similar to NATO's "*flexible response*" strategy of the 1980s requires thus both the qualitative modernization and quantitative increase of China's nuclear arsenal *vis-à-vis* the United States and Russia.

Although the most dramatic improvements of China's armed forces are indeed taking place in its strategic and theater nuclear force modernization, its future capabilities might be constrained by China's adherence to the *CTBT*, a fissile material cut-off, the possibility to deploy *Ballistic Missile Defence (BMD)* or TMD systems in Japan, South Korea, Taiwan and possible *START-IV* negotiations between all five nuclear powers.¹⁰³ Critical technological limitations such as computer capabilities for satellite-linked *C³I* or increasing the number, accuracy and survivability of delivery means might also constrain an unlimited modernization program of its nuclear forces. However, as analysis of China's last military exercises and missile tests¹⁰⁴ as well as revelations of exporting 46 powerful U.S. supercomputers to the *Chinese Academy of Sciences*¹⁰⁵ (which could be used for the testing of nuclear warheads) have shown, those technical constraints might not be the major barrier against the modernization programs for China's nuclear armed forces. Relaxed U.S. export control for sensitive dual-use

¹⁰¹ See also Nan Li, 'The PLA's Evolving Warfighting Doctrine, Strategy, and Tactics, 1985-95', here p. 460.

¹⁰² See Paul H. B. Godwin, 'From Continent to Periphery', here p. 474.

¹⁰³ Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', here pp. 564 ff.

¹⁰⁴ See Greg Gerardi/Richard Fisher Jr., 'China's Missile Tests Show More Muscle', JIR, March 1997, pp. 125-129 and M.V. Rappai, 'Chinese Military Exercises. A Study', Strategic Analysis, November 1996, pp. 1119-1131.

¹⁰⁵ See G. Milhollin, IHT, 1-2 March 1997, p.8., *ibid.*, 13 June 1997, p.5 and J. Gerth/M. R. Gordon, *ibid.*, 28 October 1997, pp. 1 and 10.

technologies could indeed help China to build stealthier and longer range cruise and ballistic missiles with a much greater accuracy¹⁰⁶ as the *Cox-report* has also confirmed.¹⁰⁷

Moreover, for the near future, all nuclear and missile development efforts are primarily directed to enhance China's military capabilities in the event of future interventions by the U.S. Navy in the Taiwan Strait. Characteristically for the present most important military contingency planning as well as for the increasing influence of the PLA under *Jiang Zemin* in shaping Beijing's foreign- and security policies is the selection of a Major-General *Wang Zaixi* as a deputy-director of *China's Taiwan Affairs Office* which has not had a military officer among its top officials since 1990. Already in December 1995, the *Central Military Commission* (CMC) as the highest political-military institution in China has set with the year 2010 a deadline for national reunification with Taiwan because China "*will definitely not tolerate the confrontational situation between the two sides after 2010.*"¹⁰⁸ In November 2000, *Zhang Wannian*, Vice-Chairman of the CMC (with his status next to President *Jiang Zemin* who heads the commission), argued that he is certain that in the next 5 years war would break out in the *Taiwan Strait* and that the PLA would be forced to initiate by striking first to paralyze Taiwan's power installations and the combat ability of its fighter jets to guarantee military victory.¹⁰⁹

4.2 China's Ambiguous Non-Proliferation and Arms Control Policies

At the same time, these Chinese nuclear weapon programs, however, are not the only proliferation concerns of China's neighbors in North- and Southeast Asia as well as of the United States. China's weaponry and military technology export policy, too, dictated by the need to earn hard currency and to raise its political-military influence in the region, have caused uncertainty and instability in the region and particularly in its bilateral relation with the U.S.¹¹⁰ It also included the export of technology and delivery

¹⁰⁶ See also Nigel Holloway, 'Cruise Control', FEER, 14 August 1997, pp. 14-16.

¹⁰⁷ See Stephen Fidler, FT, 26 May 1999, p. 4.

¹⁰⁸ Quoted following Hua Di, 'China's Security Dilemma to the Year 2010', CISAC/Stanford University 1997, here p. 1.

¹⁰⁹ See 'War in Taiwan Strait in Five Years', AFP, 19 November 2000 (via Internet: taiwansecurity.org/AFP/AFP-111900-2.htm).

¹¹⁰ See also Banning N. Garrett/Bonnie S. Glaser, 'Chinese Perspectives on Nuclear Arms Control', International Security, No.3 (Winter) 1995/96, pp. 43-78 and Mitchel B. Wallerstein, 'China and Proliferation: A Path Not Taken?', Survival, No.3 (Autumn) 1996, pp. 58-66.

means such as dual-use nuclear technology, missile technology as well as dual-use chemicals and chemical-production technologies to nuclear threshold countries such as Pakistan, Iran, Iraq and other potential nuclear proliferation states.

It underscores the main question whether China is willing and able to function as an important player of the international community in order to stabilize and not to undermine regional and global security. China is hitherto not a member of the *Missile Technology Control Regime (MTCR)* in which 28 countries agreed not to export missiles capable of carrying a 500-kg warhead more than 300 km. Although the U.S. and China reached a *quid-pro-quo* compromise in October 1993, it called simultaneously for continued *MTCR* discussions and interpretations.¹¹¹ It seemed also to continue transferring missile components and technology to countries like Pakistan and Iran.¹¹² It seems also to highlight a fundamental shift from China's traditional weapons and military related export policy to technology transfers, scientific assistance, production technologies, sub-components, and dual use transfers which are much more difficult to monitor than exports of complete weapon systems or plants. This shift, however, is not a special Chinese version of a weaponry export policy but rather a global non-proliferation trend and challenge. Whether the new U.S.-China agreement of December 1997 that was supposed to exclude any weapons and technology transfers for Iran's missile and nuclear weapon programs would really change Beijing's long-term weaponry and dual-use export policies remained uncertain due to internal and external developments during the transitional stage at that time.¹¹³ As the new non-proliferation agreement with the U.S of November 2000 (by promising not to assist countries in developing missiles with ranges of more than 300km that exceeds the limits established under the *MTCR*)¹¹⁴ has shown by itself, China has therewith indirectly confirmed that it

¹¹¹ China pointed out that the *M-11* was specifically designed with an 800 kg payload and a range of 20 km short of the *MTCR* restriction of 300 km. U.S. experts in contrast noted that a lower payload will enhance the range of the Chinese declared one and thus fall under the *MTCR*. The compromise stipulated that China will not export missiles with a range of 300 km and with a payload of at least 500 kg - see Paul H. B. Godwin/John J. Schulz, 'China and Arms Control: Transition in East Asia', *ACT*, November 1994, pp. 7-11, here p. 11.

¹¹² See Douglas, Waller, 'The Secret Missile Deal', *Time*, 30 June 1997 and Thomas W. Lippman, *The Washington Post*, 23 May 1997, pp. A1 and A33.

¹¹³ To the agreement see *The Strait Times*, 12 September 1997, p. 28 and Joseph Fitchett, *IHT*, 11 December 1997, pp. 1 and 4.

¹¹⁴ See also Jane Perlez, *New York Times*, 22 November 2000; Bryan Bender, 'China Pledge to Stop Missile Sales to Pakistan and Iran', 29 November 2000; Mary Kwang, *Strait Times*, 24 November 2000 and Jim Mann, *IHT*, 6 October 2000, p. 6.

did not live up to its formerly promised non-proliferation efforts. As U.S. intelligence sources have claimed last year, China has continued to supply materials and technologies for North Korea's and Pakistan's long-range ballistic missile programs.¹¹⁵ Any progress of non-proliferation efforts by China has been made dependent on U.S. concessions in regard to its arms sales to Taiwan. In 1998, for instance, China has even refused to make any declarations of its arms imports and exports to the *UN Arms Register* as a protest against the inclusion of Taiwan in the annual publication. In the future, the new U.S.-China non-proliferation agreement could not only be undermined by the uncertain and unsolved Taiwan question but also by *Beijing's* newly declared expansion of its arms exports in order to develop high-tech weaponry with the proceeds of overseas arms sales.¹¹⁶

Another fact is even more important. While *Beijing* has also promised and underscored its willingness to implement a nation-wide effective export control system to prevent sales of sensitive proliferation-related technologies and end-products, no specific plan for action had been implemented until early 1997 in contrast to Taiwan. Then, however, China has taken new assurances, commitments and concrete steps which meet international standards: In May 1997, China's *State Council* issued a new directive to all government agencies and non-governmental entities on the control of nuclear-related exports to prevent covered exchanges of technical personnel and information; one month later, it published an interim list of nuclear-related dual-use technologies identical to the *Nuclear Suppliers Group's* dual-use list; in September 1997, the State Council established new nuclear export control regulations identical to the list used by the Nuclear Supplier Group; finally, in October 1997, China became a member of the *NPT Exporters Committee (Zangger Committee)*. This was the first time that China has joined a multilateral non-proliferation export control regime. These various steps constitute a positive shift in China's nuclear non-proliferation policies and practices.¹¹⁷

¹¹⁵ See Bill Gertz, *Washington Times*, 6 January 2000; idem, *ibid.*, 9 August 2000; David Sanger/Eric Schmitt, *IHT*, 3 July 2000, pp. 1 and 6, and Andrew Koch, 'China Gives Missile Aid to Pakistan', *JIR*, August 2000, p. 5. To the background of China's ambiguous non-proliferation policies see also Murray Hiebert/Nayan Chanda, 'Dangerous Liaisons', *FEER*, 20 July 2000, pp. 16-18 and Mohan Malik, 'China Plays 'the Proliferation Card'', *JIR*, July 2000, pp. 34-36.

¹¹⁶ See 'China Plans Arms Exports to Fund PLA', *Straits Times*, 21 August 2000.

¹¹⁷ To the evolution of China's arms control policies see Wu Yun, 'China's Policies Towards Arms Control and Disarmament: From Passive Responding to Active Leading', *The Pacific Review* 4/1996, pp. 577-606; Hung-yi Jan, 'The PRC's Policies Toward Nonproliferation Regimes', *Issues and Studies*, 11/1997, pp. 112-132.

However, they might conflict with other strategic foreign and national security interests of China. During *Jiang Zemin's* South-East-Asian visits in India, Pakistan and Nepal at the end of 1996, he confirmed, for instance, to maintain its cooperation with Pakistan concerning the "*civilian use of nuclear energy*".¹¹⁸ Thus far, China has remained neither a "*team player*" nor a "*rogue elephant*".¹¹⁹

In order to promote transparency, security and stability in East Asia, the Chinese willingness to cooperate is an essential prerequisite for new arms control negotiations and the success of treaties and regimes such as a global fissile material production cut-off convention.¹²⁰ Similar as in the case of the *CTBT*, an Indian signature is dependent on China and a Pakistani ratification on India's. Thus far, Chinese strategists seem not very concerned about future regional proliferants around its borders.¹²¹ Therefore, China stands at the cross-roads in its non-proliferation policy that might become a litmus test of its future role in regional and global affairs with direct implications of foreign policies towards *Beijing*. A continued Chinese nuclear and missile technology cooperation with Pakistan, for instance, might further backfire and finally be counterproductive for *Beijing's* own security some day in the not-too-distant future as the five Indian nuclear tests in May 1999 and *New Delhi's* justification as a counterbalance to China's nuclear arsenal (and not Pakistan's) have already demonstrated.

Moreover, whereas other East Asian states are cutting their defense budgets, China's defense budget in 1998 and 1999 enjoyed a 10th and a 11th year of double-digit growth, compounded by significant cuts in troop strength that were announced in 1997. The defense budget of 1998 increased again by 12.9 per cent to US-\$10.99 billion in 1998-99 (15.8 percent in overall spending). The 1999 increase in China's official defense budget by 12.7 percent to 120.5 billion *Yuan* (almost \$15 billion) — for a huge real defense budget of more than \$40 billion (more than the individual defense budgets of

¹¹⁸ See Neue Zuercher Zeitung (NZZ), 29 November 1996, p. 5 and *ibid.*, 5 December 1996, p. 5.

¹¹⁹ See to the metaphor James V. Feinerman, 'Chinese Participation in the International Legal Order: Rogue Elephant or Team Player?', *The China Quarterly*, March 1995, pp. 186-210.

¹²⁰ See Lisbeth Gronlund/David Wright/Yong Liu, 'China and a Fissile Material Production Cut-off', *Survival*, 4 (Winter) 1995-96, pp.147-67. To a Chinese view see Xia Liping, 'Maintaining Stability in the Presence of Nuclear Proliferation in the Asia-Pacific Region', *Comparative Strategy*, 1995, pp. 277-286.

¹²¹ See Taeho Kim, 'China and Virtual Nuclear Arsenals', in: Michael J. Mazarr (Ed.), 'Nuclear Weapons in a Transformed World', pp. 207-217, here p. 214.

Great Britain, France or Germany), according to the latest *Military Balance* of the *International Institute for Strategic Studies* — plus the last year's enlarged gap between double-digit military spending increases and overall growth of the gross domestic product of only 7.1 percent in 1999, have all heightened the sense of latent threat among China's neighbors. Immediately after the bombing of the embassy in Belgrade, the *Politburo* under *Jiang Zemin* approved apparently additional expenditure on defense. According to a *Hong Kong* publication, an additional 20 billion *Yuan* (\$2.5 billion) from the current 1999 budget for large-scale infrastructure programs, has been reallocated to defense projects. This sum has then been raised to a total of 100 billion *Yuan* (\$12.5 billion) by 2003. In addition, the *Council of State* is said to have approved, in summer of 1999, a further 80 billion *Yuan* (\$10 billion) for the acquisition of new weapons systems. If these figures are accurate, then the defense budget for 1999 was 215.2 billion *Yuan* (\$27 billion), almost twice as high as the official estimates.¹²² Given China's new *White Paper* of "*National Defense in 2000*"¹²³ — which is not just a PLA document but an assessment fully coordinated among the party, PLA and other government ministries and organizations —, the much more negative perception of the U.S. will translate in further military spending to improve the country's military capabilities to defend itself. But it will also create a more heavy burden for the economic foundation of China's economic and political transformation.

The development of the nuclear-weapons arsenal therefore also has high relevance to the security of China's smaller neighbors. The People's Republic seems less interested in creating a true military balance than in building up effective military deterrent capabilities against the United States, in order to increase sharply the US vulnerability and thus raise the threshold of American intervention through a scenario of "*asymmetric warfare*." Against this background of antagonistic security perceptions and concepts, the security dilemmas in East Asia could be further aggravated.

¹²² See F.Umbach, 'China's Destabilizing Arms Buildup', *Transatlantic Internationale Politik* 4/2000, pp. 69-75, here p. 72.

¹²³ See 'White Paper "China's National Defense in 2000"' (via Internet: www.china.org.cn/english/2791.htm). Whilst the older White Paper on Defense of 1998 mentioned the U.S. 10 times, each positively, the new one of 2000 mentioned the U.S. 13 times, thereby 11 times negatively - see also John Pomfret, *IHT*, 16 November 2000, pp. 1 and 7.

4.3 China's Objections Against TMD-Programs of its Asian Neighbors¹²⁴

In the view of China, an effective TMD-option of the United States and its allies Japan, South Korea and Taiwan against China's nuclear ballistic missiles would not only question its nuclear deterrence against those potential aggressors but also dramatically increase the U.S. ability to launch a disarming first strike against China. Consequently, China is — like Russia — essentially interested on the endorsement of the principles behind the ABM-treaty.¹²⁵

Since the first discussions of a *TMD*-option for Japan, South Korea and Taiwan, Beijing has been alarmed and protested strongly against such capabilities which would cause "*a new arms race in Northeast Asia*". The USA aims to have reliable TMD systems not later than 2007. *Benjamin A. Gilman*, chairman of the U.S. House of Representatives International Relations Committee, has called for the creation of a regional-wide *Northeast Asia Defence Organisation (NADO)* to combine U.S. efforts with those of its East Asian allies to develop an effective TMD-system.¹²⁶ Beijing's objections are not only directed against a *TMD*-option of Japan but also of South Korea and in particular against a joint *TMD*-capability involving Taiwan because it might undermine Beijing's missile assertive policies towards *Taipeh*. In the view of Beijing, a Taiwanese *TMD*-capability might strengthen the pro-independence forces on the island to declare the country as an independent nation. U.S. officials have already confirmed that the U.S. has provided Taiwan with *TMD* information and has sold several *Patriot* anti-missile batteries which are the most advanced anti-missile systems in the region. The *Clinton* government has also considered to sell four *Aegis*-class air-defence destroyers to Taiwan (after it has already approved in principle an expensive early warning radar in the spring of 1999) which would significantly enhance Taiwan's anti-missile capabilities. But for the time being, it will not sell those destroyers. It has linked such a delivery with China's future arms build-up. Furthermore, the *Pentagon* has quietly and secretly expanded its military ties and cooperation programs with the Taiwanese armed forces since the missile crisis in the Taiwan Strait in 1995-96.¹²⁷ In

¹²⁴ See also F.Umbach, 'World Gets Wise to P'yongyang's Nuclear Blackmail – Part Two'.

¹²⁵ See also Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', here p. 573 f.

¹²⁶ See also the Opening Statement of the chairman held by the committee on march 24, 1999, reprinted by NAPSNet Special Report, 24 March 1999.

¹²⁷ See Jim Mann, Los Angeles Times, 24 July 1999.

the view of China, US arms exports to Taiwan are viewed as a matter of proliferation concern. In their bilateral discussions with the U.S., Beijing has repeatedly sought to link U.S. arms exports to Taiwan to U.S. concerns of Chinese arms sales to countries such as Pakistan and Iran — an attempt which the Clinton government resisted to accept.¹²⁸

Meanwhile, the PR China government has made clear towards Washington that a continual delivery of U.S. military equipment to Taiwan that could enhance its missile defense capabilities would be considered as a hostile act and could ultimately be "*the last straw*" in the U.S.-Chinese relations.¹²⁹ Taiwan itself has in August 1998 tested successfully a converted version of the island's locally developed *Sky Bow-II* anti-aircraft missile in an anti-ballistic missile test whilst Washington has declared in January 1999 to spend an additional \$6.6 billion to develop a NMD system. Furthermore, Taiwan has announced to spend \$600 million to indigenous missile programs during the next fiscal year. Fearing to upset China and to cause unwanted friction in the bilateral relationship, the *Clinton* government (in contrast to the mood in the U.S. Congress), however, seems presently rather unwilling to provide Taiwan with TMD systems in the foreseeable future and tries therefore to play on time.¹³⁰ That however, creates numerous security challenges for Taiwan, particularly if China should indeed have obtained secret US nuclear information for possible use with its own missile program (such as the miniaturization of nuclear warheads).¹³¹ Following massive U.S. pressure in the 1980s, Taiwan has given up a nuclear weapons program as an effective deterrence option against *Beijing*. However, it is considering to develop its own counterforce short-range ballistic missile force (by restarting the "*TienMa*" program with a range of 1,000km which had been stopped in 1996 following political pressure by *Washington*) that will cover much the adjacent coastal region of the PR China with a no first-use doctrine. PR China itself is in the process of increasing its nuclear arsenal in numbers and in quality. Presently, for instance, it is in the process to deploy an advanced, longer-range version of the *DF-21*, provisionally called *DF-21X*, with an

¹²⁸ See Bates Gill, 'Proliferation and the U.S. Alliances in Northeast Asia', here p. 9.

¹²⁹ See John Pomfret, IHT, 6-7 March 1999, pp. 1 and 4; and James Kynge, FT, 7 March 1999, p. 1.

¹³⁰ See Bryan Bender, JDW, 27 January 1999, p. 5 and idem, 'USA to Put \$1b into Missile Defence Systems', *ibid*, 28 October 1998, p. 2..

¹³¹ See Walter Pincus, Washington Post, 17 February 1999; Michael Laris, IHT, 13-14 March 1999, p.6 and Bruce Gilley, 'Red Scare', FEER, 25 March 1999, p. 22 f.

extended range of 3,000km and an improved accuracy.¹³² Moreover, Beijing has launched up to six satellites last year which will improve the accuracy of its ballistic missiles and will allow detailed reconnaissance of Taiwan's defense capabilities. At the same time, the PLA has made considerable progress in developing manoeuvrable short-range ballistic missiles with ranges between 300-600km and is developing a new generation of land attack cruise missiles to target accurately key Taiwanese military installations by using newly acquired dual-use technologies such as the *GPS* and the *inertial navigation guidance system (INS)*.¹³³ Meanwhile, most of its deployed 200-250M-11 (range 300km) and M-9 (range 600km) short-range ballistic missiles (in contrast to 30-50 *SRBMs* in 1995-96) in provinces adjacent to the 175-km-wide Taiwan Strait have already an improved accuracy estimated to 20-30 metres by using *GPS* and *INS* minicomputers. The deployment of those missiles is at least partially the result of the fact that the PLA still regards the controversial missile tests of 1995 and 1996 — in contrast to China's Foreign Ministry and other civilian ministries — as a victory.¹³⁴ In few years, this Chinese missile build-up might — it plans to raise the number to around 650 in the next years with a present deployment of 50 new missiles a year¹³⁵ — shift the balance of deterrence in favor of mainland China which can result in new and more risk-taking policies on Beijing's side. In response to this missile threat, Taiwan will deploy three batteries with 200 *Patriot* missiles in northern Taiwan to protect the capital city and economic center albeit they will be incapable to shoot own 100 percent of incoming missiles.¹³⁶

In the view of the PR China, the U.S. is exaggerating the military threat of missile attacks from North Korea (not to speak about China's nuclear missile force) and using it as a pretext to strengthen its military alliance and enhancing the military presence in East Asia in order to contain China.¹³⁷ Moreover, an effective TMD-option of the U.S. and its main allies in East Asia against China's nuclear missiles would not only question its nuclear deterrence against potential aggressors but also dramatically increase U.S. capabilities to launch a disarming strike against China. Furthermore, if Japan would

¹³² See Paul Beaver, 'China Prepares to Field New Missile', JDW, 24 February 1999, p. 3.

¹³³ See Tony Walker/Stephen Fidler/Mure Dickie, FT, 12 March 1999, p. 6.

¹³⁴ See James Kynge, FT, 11 February 1999, p. 12.

¹³⁵ See Tony Walker/Stephen Fidler, FT, 10 February 1999, pp. 1 and 4; James Kynge, *ibid*, 11 February 1999, p. 12 and ADJ 3/1999, p. 56.

¹³⁶ See ADJ 3/1999, p. 56.

prefer a naval TMD-option, based, inter alia, on its *Aegis*-class destroyers, then even Taiwan might benefit from such a naval-based TMD umbrella. This might further hamper Beijing's reunification with Taiwan.

Instead of an TMD-option, *Beijing* has proposed to transform the bilateral 1972 *ABM*-Treaty between the U.S. and the Soviet Union into a multinational treaty.¹³⁸ But whilst the U.S. seems to be reluctant to develop jointly TMD capabilities with Taiwan, it has actively demanded from Japan and South Korea to join the TMD-research projects. As *Pentagon* officials have indicated the U.S. must ensure in jointly developing TMD-capabilities with Japan and South Korea not to transfer such technologies to Taiwan.¹³⁹

Although *Beijing's* objections against TMD-systems in its three neighboring countries are to some extent understandable, most of China's argumentation is not very convincing and persuasive if it is analyzed in detail:

- Besides Russia, China is the only regional great power which possesses nuclear weapons in East Asia. With the retrenchment of Soviet/Russian military power from its frontiers in the aftermath of the Cold War, China is now enjoying an unprecedented strategic latitude in the region. Moreover, it is currently the only nuclear power in the world which is steadily enhancing the numbers as well as the quality of its nuclear arsenal whereas all the other nuclear powers have downsized their nuclear arsenals since the beginning of the 1990s. Against this background, to transform the bilateral *ABM*-treaty into a multilateral one would only stabilize the formal *status quo* in the region: China as an expanding nuclear armed weapon state with Japan and South Korea as non-nuclear weapons powers in its proximity. Japan and South Korea, without the acquisition of an effective defense shield against ballistic missiles, would be thus confronted with an increasing modernization and expansion of China's nuclear missile arsenal in the future. Ultimately, they would have no effective capabilities to defend their country against the newly emerging missile threat.
- Against this background, Japan and South Korea can only rely upon the U.S. extended nuclear deterrence umbrella which, however, has lost some of its former

¹³⁷ See John Pomfret, IHT, 6-7 March 1999, pp.1 and 4.

¹³⁸ See Frank Ching, 'TMD: Safety Net or Threat?', FEER, 4 February 1999, p. 35.

¹³⁹ See Bryan Bender, JDW, 27 January 1999, p. 5.

credibility in the new multipolar post-Cold War security environment. Nonetheless, as long as the U.S.-Japanese security alliance with its dual functions - constraining as well as protecting Japan — is maintained, the "*nuclear problem*" is solved and a "*nuclearization*" of Japan's defense policies remains only a theoretical option on the future horizon. If the security alliance will collapse, however, Japan would be surrounded by nuclear and potentially hostile neighbors (including a united, perhaps nuclear Korea). As Robyn Lim has argued: "*While Japan may lack strategic ambition, it does not lack strategic anxieties. Any breakdown of the US-Japanese alliance would oblige Japan to look to its own security, and nuclear weapons are the 'isolationist dream'.*"¹⁴⁰

- In the case that Japan feels, indeed, insecure and isolated, it might not only be tempted to renounce its former non-nuclear weapon status, but also to acquire long-range offensive maritime strike warfare capabilities as a deterrence option and the only military alternative to TMD-systems as it is seriously considered by South Korea and Taiwan. Those conventional offensive precision strike-warfare capabilities (like in the Gulf-War) intended to destroy the missile launchers, storage bases, logistic sites, road or rail transport systems and command, control, communication, and information centers (C³I), however, might undermine regional stability and deepen the regional security dilemmas even more. A Japan without an effective anti-missile defense shield in a potential hostile security environment has thus similar security implications. The only defense alternative for a Japanese TMD-option would be drastically enhanced conventional capabilities, including offensive, long-range maritime naval and air force conventional capabilities, being able to destroy nuclear weapons with preemptive or even preventive strikes. Those conventional offensive counter-force postures, however, would be much more destabilizing for the entire region as well as much more dangerous for China itself. In this light, China should be much more concerned about a security environment without TMD capabilities because of the "*near-certainty of war*", particularly in an escalating crisis.¹⁴¹

¹⁴⁰ Robert Lim, 'India's Nuclear Testing: What Does it Mean for Japan?', PacNet Newsletter, No. 21, 22 May 1998.

¹⁴¹ See also Larry M. Wortzel, 'The Danger of No Theatre Ballistic Missile Defences', Strategic Studies Institute Newsletter, February 1999.

- Against this background, China ultimately denies Japan to acquire a legitimate defense capability against a potential ballistic missile threat. What China demands is ultimately thus nothing else than total security for itself — which means simultaneously total insecurity and vulnerability for Japan and the rest of East Asia. That, however, is neither realistic nor desirable for the future stability of the region.
- Moreover, China's missile firing diplomacy in 1995 and 1996 — which was the first time that a nuclear power used its missile arsenal for psychological warfare and terror in peacetime — contradicts its own *no-first-use* pledge and negative security assurances. While Beijing seems in this regard to have moved from an unconditional to a conditional *no-first-use* posture in 1995 which seems to have excluded not only India, Pakistan and Israel, but also Taiwan¹⁴², China's policy towards Japan is similar ambiguous: it claims never to use nuclear weapons against a non-nuclear state, but simultaneously maintains the argumentation that TMD capabilities in Japan would erode the credibility of China's nuclear forces.¹⁴³ Therewith China has indirectly confirmed that Japan is targeted by China's nuclear missiles. But as long as Japan does not acquire long-range missile forces and other offensive weapons capabilities and as long as China is maintaining its current military strategy of "*minimum deterrence*", a modest Japanese TMD capability would neither in size nor technically undermine the credibility and effectiveness of China's nuclear posture. But if China chooses to adopt a "*limited nuclear strategy*" in contrast to "*minimum deterrence*" (in the Chinese, both approaches are not the same), it would require a stronger and more flexible nuclear capability to strike targets not only in the adversary's homeland, but also on the battlefield and the theater. Given the fact that China seems indeed to

¹⁴² China's original no-first-use policies dates back to a letter to the UN Secretary General on 28 April 1982, which stated that "*at no time and under no circumstances will China be the first to use nuclear weapons, and that it undertakes unconditionally not to use or threaten to use nuclear weapons against non-nuclear countries and nuclear-free zones.*" The revised policy, released by China's Foreign Ministry on 5 April 1995 and placed in the records of the Geneva-based Conference on Disarmament the following day, stipulates that China's policy not to use or threaten to use nuclear weapons "*naturally applies to non-nuclear weapon states parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) or non-nuclear weapon states that have undertaken any comparable internationally binding commitment not to manufacture or acquire nuclear explosive devices*" - see Brahma Chellaney, 'After the Tests: India's Options', in: *Survival*, Vol. 40, No. 4, Winter 1998-99, pp. 93-111, here p. 111 (fn. 22).

¹⁴³ See also T.Delpech, 'Nuclear Weapons and the 'New World Order': Early Warning from Asia?', here p. 73.

move in this direction, its objectives and diplomatic protests against any TMD-option become much more understandable from a military strategic point of view.

- Such a military defense posture serves in the Chinese view primarily the objective to achieve specific political aims. Accordingly, the expansion of its nuclear and conventional capabilities serves China's historic ambitions and grievances to raise again as the "*Middle Kingdom*". It enables Beijing to exert leverage directly or indirectly over Japan's political and military decision-making in peacetime as well as in crisis or during violent regional military conflicts.¹⁴⁴
- It is also necessary to bear in mind that even in the case that with or without TMD-capabilities of its East Asian neighbors, *Beijing's* strategic and theater nuclear force modernization and numerical expansion will nonetheless continue as its budget permits because of global military-strategic objectives (vis-à-vis the U.S.) and internal bureaucratic factors as Chinese experts admit privately.¹⁴⁵

In general, a military-political *modus vivendi* seems — at least theoretically — not excluded *per se* between China and its neighbors as well as with the U.S. (also in regard to NMD option of the U.S.). But as long as there is no serious strategic dialogue between *Washington* and *Beijing* as well as between China and its East Asian neighbors taking place, such a *modus vivendi* will be extremely difficult to achieve in the forthcoming years.

5. Korea: Giving Up its Nuclear and Ballistic Missile Ambitions?

5.1 The Crisis on the Korean Peninsula

North Korea's nuclear and missile blackmail strategies — including refusing to give international inspectors full access to its nuclear sites, its ongoing missile and technology exports to Pakistan and Iran, its own unexpected missile launch of the *Taep'o-dong-I* on 31 August 1998 and revelations of vast underground facilities under construction — have led to calls for a major re-evaluation of the US policy towards North Korea. Hereby, North Korea's blackmail policies have not only threatened the

¹⁴⁴ See also Stephen A. Cambone, 'The United States and Theatre Missile Defence in North-east Asia', in: *Survival*, Vol. 39, No. 3, Autumn 1997, pp. 66-84, here in particular p. 72 f.

¹⁴⁵ So the result of discussions the author had during the last two years with Chinese experts. See also James A. Lamson/Wyn Q. Bowen, 'One Arrow, Three Stars', Part I, here p. 218.

October 1994 Agreed Framework and therewith the *KEDO*-process to freeze its nuclear plutonium program but also the engagement policies of the U.S. and the international community. Furthermore, the DPRK is believed to have produced sufficient plutonium to construct 2-6 nuclear bombs.

The *Geneva Agreed Framework* of October 1994 only stopped the production of plutonium at the *Yongbyon Atomic Energy Research Center*. Whether therewith it has really halted or severely curtailed North Korea's nuclear weapons program, became more and more questionable. Furthermore, the *Agreed Framework* cannot stop North Korea's ballistic missile programs.

In the U.S. perception it became clear until 1998 that its engagement policy did not modify North Korea's overall behavior. The *Agreed Framework* failed so far to open North Korea's society for the outside world and to constrain North Korea's ruthless behavior. In the view of its critics, it has only provided a framework for moving from one crisis to the next one without seeing any light at the end of the tunnel. Indeed, these frequent, chronic crisis have weakened the agreement's credibility and support, particularly in the U.S. Congress. The so-called "*benign neglect option*" has gained increasing support which calls to cut off its few contacts with North Korea, keep all sanctions in place, and focus on maximizing U.S. deterrence capabilities. But if implemented, it would also undermine South Korea's "*sunshine policy*" vis-à-vis its northern brother and therewith risk a deterioration of the U.S.-South Korean security alliance. Although the *Clinton* government was maintaining its engagement policy vis-à-vis North Korea, it has modified its policy in 1998 if its package of economic (including easing U.S. trade sanctions, providing food and development aid) and political benefits to curb the DPRK's missile and nuclear programs would fail. Then it would have adopted a second track approach which would include to adopt harsher containment measures, possibly including a military naval blockade of the North.

Given the fact that North Korea sees its missile capability as its last trump card as part of a strategy of drawing Washington into a negotiation over withdrawing U.S. troops from South Korea, the future prospects of the *Agreed Framework* seemed rather poor until 1999. Against this background, more and more U.S. experts and politicians have demanded a fundamental diplomatic restructuring which shall include a counter-diplomatic agenda on ICBM and troop issues in a broader context of arms control measures in the Korean peninsula. What has been lacking in the U.S. policies towards

North Korea is a comprehensive, long-term strategy that creates a common framework for the *Agreed Framework/KEDO* issues, the US-DPRK missile talks, and other initiatives.

Hence, North Korea seems rather unwilling and unable to bargain away its only trump card it still has in its hands: its ballistic missiles. Ultimately, they cannot be divorced from the ultimate goal of sustaining the North Korean system as well as the political regime. In this regard, the US and western strategy of a "*comprehensive engagement*" can hardly succeed. Even under the best circumstances, diplomacy with North Korea will remain be tense and frustrating. On the other hand, there is no other viable political alternative if one seeks to avoid a return to disastrous preemptive military options the US was considering in 1994 to stop North Korea's nuclear program. The implementation of the *Agreed Framework* remains the best approach to preventing nuclear weapons development in North Korea. At the same time, North Korea is increasingly dependent on outside support to sustain itself which provides at least more incentives for a greater dialogue. Nonetheless, a second *Taepo-Dong* missile launch would have threatened all existing engagement efforts with North Korea. It was seen as a litmus test for Pyongyang's intentions to cooperate or to confront the outside world.

North Korea's recent interest in economics and business has been underscored by an increase in late 1998 and early 1999 in the numbers of DPRK diplomats posted overseas, particularly to Europe after a 30 percent reduction witnessed throughout 1998. It remains to be seen whether *Pyongyang's* new diplomatic activism (Italy was the first G-7 member to establish diplomatic relations in January 2000, followed by Spain, Great Britain and the Netherlands) will have lasting positive implications for security in North East Asia. *Pyongyang's* main interest is in foreign aid and investment, but the above mentioned activities could also reflect a steady increase in self-confidence within the North Korean regime as the country's protracted famine shows signs of some easing.¹⁴⁶ Moreover, bilateral trade with South Korea reached a record US\$330 million in 1999, up from US\$220 million in 1998.¹⁴⁷ At the same time, inter-Korean social, cultural, and personnel exchanges have increased remarkably. By the end of 1999, 581

¹⁴⁶ See also Shim Jae Hoon, 'Signs of a Thaw', FEER, 10 February 2000, p. 24; Lorien Holland, 'Hello, World', *ibid.*, 23 March 2000, p. 24, and Howard W. French, IHT, 18-19 March 2000, pp. 1/5.

¹⁴⁷ See 'Kim Sticks with Sunshine Policy', Korea Now (29 January 2000), pp. 5 f., here p. 6.

South Korean companies were already doing business in North Korea, and more than 20,000 South Koreans had visited the North since February 1998.

As of today, any breakthrough in the inter-Korean dialogue has been prevented by North Korea's insistence on certain conditions, such as the withdrawal of US troops from the Korean peninsula and an end of joint military cooperation among South Korea, the US, and Japan. Nevertheless, *Pyongyang* warmed up to the idea of high-level inter-Korean talks. Ultimately, however, the *DPRK* leadership will pursue various strategies to assure the interim survival of the political regime and will shift back and forth among them as it sees fit. Therefore, and recent positive trends on the Korean peninsula notwithstanding, North Korea's gradual inclusion into the international community is by no means assured, and the issue requires a constant and coherent international crisis management and multilateral engagement.

5.2 The October 1994 Agreed Framework and KEDO: A Sufficient Diplomatic Instrument for Solving All Security Problems on the Korean Peninsula?

The accord provides, among other things, for the establishment of a multinational consortium that will finance and supply North Korea with two light water reactors (*LWRs*) by the target 2003. In return, North Korea agreed to freeze its nuclear program immediately, pledged not to refuel its *Yongbyon* reactor, undertook to halt construction of another reactor at that site and of another one at *Taecheon*, and agreed to seal the *Yonbyon* plutonium separation plant and the fabrication plant at the site, and to leave the spent fuel discharged from the smaller reactor in June 1994 in storage, without plutonium separation. To offset the energy deficit that North Korea claimed it would face by the freezing of its reactors and related facilities, the US was to arrange for the delivery to North Korea of heavy oil for heating and electricity production "*that will reach a rate of 500,000 tons annually*". This grant of heavy oil would stop with the completion of the first *LWR*.

Furthermore, the *Agreed Framework* also provides steps toward the normalization of relations between *Pyongyang* and *Washington*, US assurances against the threat or use of nuclear weapons against the North, and a North Korean commitment to implement the "*1992 North-South Declaration on the De-Nuclearization of the Korean Peninsula*." For the first time, North Korea also agreed to *IAEA* inspection of the two undeclared waste sites, which can help to reveal the history of past plutonium production.

As a byproduct of the agreement, the construction of the *LWRs* would require thousands of South Korean engineers, technicians, and laborers to work, live, and socialize in the North for a decade, thereby improving the chances for more normal

relations between *Pyongyang* and *Seoul* and lifting, at least partially, the veil of secrecy surrounding the North. In his light and the fact that *KEDO* can be seen as the first multilateral security institution (albeit for specific purposes), the *Framework* is seen as the centerpiece of a broader diplomatic effort made by the US and the international community to integrate the DPRK into the world community and restrain its "rogue" behavior through systematic multilateral engagement.

Thus far, *Pyongyang* continues to observe the *October 1994 Agreed Framework* and a moratorium on missile launches as it negotiates with the US, South Korea and Japan. At the same time, however, North Korea has been continuing with missile development short of test launches (indeed, it has only suspended testing of long-range ballistic missiles), and is continuing to selling missiles as well as missile technology to customers around the globe. In the absence of comprehensive inspection procedures, other countries cannot be confident that North Korea has really stopped working on the development of nuclear, biological and chemical weapons. Its missiles are capable of striking Japan and the US and inflicting even greater damage on South Korea. Their development has security implications for South Asia and even for Europe.

5.3 A Balanced Assessment of the Agreed Framework: The Failing Effective and Comprehensive Inspection Regime

However, according to the accord, the inspection of the two undeclared sites has been postponed for an extended period (four to six years), creating a special safeguard status for North Korea. The inspection problems for verification of North Korea's past weapons program and an indication for ongoing research of nuclear weaponry have never been solved effectively. The *IAEA* has been allowed to conduct routine and *ad hoc* inspection of "unfrozen" nuclear facilities but not of the reprocessing plant, and it has been allowed merely, for instance, to measure but not to analyze the spent fuel. Furthermore, many suspicious underground facilities are not inspected because of a failing comprehensive and effective inspection regime (see also the example of Iraq). Hence, a considerable part of North Korea's previous nuclear weapon program and many nuclear facilities remain unmonitored. According to *IAEA* inspectors the information and access provided by *Pyongyang* so far have been insufficient to build a complete picture of the North Korean nuclear weapons program.

Therefore, other countries and many foreign experts (particularly in the *US Congress*) remain suspicious whether North Korea has really stopped working not only on the development of nuclear but also biological and chemical weapons (the latter are not covered by the *Agreed Framework*; North Korea is a party to the *Biological Wweapons Convention/BWC*, but not to the *Chemical Weapons Convention/CWC*). In this light, the

Kumchang-ri inspection is an example: Although the May 1999 *Kumchang-ri*¹⁴⁸ inspection by fifteen US experts under the direction of former secretary of defense Dr. *William Perry* did not produce evidence for the previous or intended production of weapons-grade plutonium or reprocessing activities¹⁴⁹, the inspection report concluded that the site could support the respective facilities in the future if substantially modified. Therefore, a follow-up visit to *Kumchang-ri* in May 2000 could also not provide any definite conclusions. Arguably, after more than six months passed since the first suspicions over the site had emerged, North Korea had enough time to clear that facility and to move its suspected nuclear weapons program to another underground facility which is not covered by the agreement.

5.4 A Missile Deal Emerging? – Perspectives

The sensational message of the new Russian President *Vladimir Putin* in July 2000 that North Korea is now willing to abandon its ballistic missile program and exports in return for "civilian" space technology and the willingness of other states to launch at least two North Korean space satellites a year offered new hopes to finalize an agreement to curb North Korea's missile exports.¹⁵⁰ Already back in 1998, *Pyongyang* has shown some willingness to trade its missiles for a price. Shortly after its missile test in August 1998, North Korea announced to be ready to export the *Taepo-dong-I* missile by the year 2000 at a cost of \$6 million each.¹⁵¹ Simultaneously, it demanded \$500 million from Washington in compensation for stopping missile exports to the Middle East.¹⁵² On 16 June 1998, it seemed even willing to negotiate an end to its missile tests and deployments. Such a verifiable end to North Korea's missile tests and deployment would indeed enhance Japan's security, stabilize the *KEDO*-process and contribute to global non-proliferation efforts to curb missile and related technologies transfers.

While the new North Korean offer made towards the Russian President seemed to give Russia a considerable amount of leverage vis-à-vis *Washington's* missile defense plans and the revision of the *ABM*-treaty, North Korea's offer was dubious in many ways from

¹⁴⁸ On *Kumchang-ri* and other nuclear facilities in North Korea see in particular Joseph S. Bermudez Jr., "Exposing North Korea's Secret Nuclear Infrastructure – Part One," JIR, July 1999, pp. 36-41; "Part Two," *ibid.*, August 1999.

¹⁴⁹ The team was permitted to measure all underground areas and to take soil and water samples.

¹⁵⁰ See Michael R. Gordon, IHT, 20 July 2000, pp. 1 and 4.

¹⁵¹ See Don Kirk, IHT, 3 September 1998, p.4.

¹⁵² See TKH, 3 September 1998, p.3.

the very beginning. *Pyongyang* cannot really expect that other countries would provide it with advanced missiles it could easily copy and use it for its own secret military missile programs. Furthermore, the question is still unanswered by Russia and North Korea for which purposes North Korea really needs any space satellites in the light of its severe economic and food crisis. But in a new meeting in August 2000, *Kim Jong-Il* already retreated from his offer made to *Putin*. He is reported to have stated that he did not intend to make a serious proposal to *Putin* but brought the idea up in a "*passing, laughable matter*". As other remarks by the North Korea's leader suggest he has had some second thoughts about his proposal to *Putin*. In addition, the diplomatic slap and insulting to *Putin* has substantially decreased Russia's intended future bargaining position of its reengagement policy in East Asia it received during the first half of the year 2000.¹⁵³ But it also highlights the future unpredictability of *Kim Jong-Il* for Russia and the rest of the world. Whether *Pyongyang* sees its missiles as a card to play in a bargaining deal or as an issue that is not traded, remains to be seen.

5.5 TMD as a Bargaining Chip for South Korea and the U.S.?

From a U.S. point of view, North Korea was not the only "*rogue state*", whereas China is seen as the major future potential threat to U.S. interests in the region and beyond. From a South Korean point of view, Seoul — in contrast to Japan and Taiwan — has ruled out any participation in the proposed *TMD* program for the time being. It is explained due to the huge costs for a country that had significantly to reduce its defense budget as the result of the financial crisis as well as due to the specific designs of the *TMD* program because its main threat stems from North Korea's short-range *Scud* missiles and artillery massed just 50km from *Seoul*. Those short-range missiles, however, cannot effectively be countered by the *TMD* system which is aimed at detecting and intercepting primarily medium- and long-range missiles (as it looks now). Instead of it, *Seoul* is developing its own anti-ballistic systems, acquiring *Patriot* or the Russian *S-300V Grumble SAMs* and developing own offensive surface-to-surface ballistic missiles ('*Hyonmu*'). However, the limits of the 1979 *memorandum of understanding* on technology sharing between the US and South Korea restricts Seoul from testing missiles with a range of more than 180km. Its new missile which had been

¹⁵³ See F.Umbach, 'Russia's Strategic and Military Interests in North and South East Asia', here p. 296.

tested on April 10, 1999, however, might already have a range of 300km. While *Seoul* is interested to boost the missile performance to more than 500km (actually it needs a ballistic missile to 800-1,000km to target military bases along North Korea's border with China), the US seemed unwilling to provide the technological assistance unless *Seoul* agrees to join the *Missile Technology Control Regime (MTCR)* which restricts the maximum range to 500km and aims to prevent exports of key technology of ballistic missiles to other states. Finally, after extended controversial 20 rounds negotiations since 1995, both sides reached a compromise in October 2000 in the form of a policy declaration, allowing South Korea to produce and deploy missiles with a range of 300km range and a 500kg warhead as well as to develop missiles with a range of up to 500km for research purposes.¹⁵⁴ But even the 300km range gives South Korea the capability to strike *Pyongyang* and other key North Korean cities. South Korea's military establishment believes that such a counter ballistic missile and deterrence force would be much more effective than a costly and ineffective TMD. But such a long-range missile buildup might not only threaten its global and regional *MTCR* and non-proliferation policies, but perhaps also incite a new arms race in an already complex military-strategic environment in Northeast Asia and, furthermore, undermine crisis stability and conflict management by creating additional incentives for preemptive military strike options on both sides of the Korean peninsula. However, it might be a bargaining chip vis-à-vis North Korea's ballistic missile development, tests and exports.

6. Conclusions and Perspectives: Implications for Japan's Security Policies in the 21st Century

While North Korea's missile exports and transfer of missile technology seemed not to have direct security implications for Japan, its missile test of August 1998 fundamentally changed Japan's short-term security perceptions and defense policies. After long and controversial discussions of the huge costs (according to some estimates over \$15 billion for Japan's commitment) and constitutional constraints as well as preliminary studies, *Tokyo* agreed with the U.S. to conduct joint research on a theater missile defense system that could protect the island nation from ballistic missile attack and strengthening its bilateral alliance. In November 1998, Japan's government approved

¹⁵⁴ See Shin Yong-bae, *The Korea Herald*, 18 October 2000.

the plan to launch four reconnaissance satellites by the spring of 2003 after considering such a capability for nearly a decade albeit it still requires legislative ratification in the Diet. Finally in August 1999, the U.S. and Japan formalized an agreement to conduct joint technology research on TMD.

Regardless the question, whether the missile carried a satellite or not, the missile test demonstrated that Japan is within range of North Korea's ballistic missiles. Furthermore, it indicated that after the United States, Russia and China in the era of the Cold War, North Korea has now acquired the advanced technology to become the fourth country with an operational land-based, intercontinental ballistic missile capability in few years. North Korea has obviously made considerable progress in mastering technical obstacles of multi-staged long-range ballistic missiles whose range and capability caused surprise even in U.S. intelligence circles. Until that time, North Korea's ballistic missiles were not expected to reach the 4,000km to 6,000km range until 2002-2004. It signaled to both the U.S. and Japan that it has now the capability to strike at US military facilities at least in Japan and on *Okinawa*. It is even possible that US bases in *Guam* and *Hawaii* will eventually come within North Korea's missile range in some years.

Reportedly, the technological progress of North Korea's ballistic missile systems has apparently made with the external assistance of engineers, designers and other scientists from Russia and Ukraine.¹⁵⁵ Although those reports are hardly to verify, up to 2,000 Russian scientists and engineers are believed to work in North Korea to develop missile and other weapons projects. In July 1998, the findings of the *Commission to Assess the Ballistic Missile Threat to the United States*, chaired by the former and new Defense Secretary of the *Bush-Administration*, *Donald Rumsfeld*, and delivered to the *U.S. Congress*, already concluded that ballistic missile threats are evolving more rapidly than previously estimated by the U.S. intelligence community. The '*Rumsfeld-report*' also explained the reduced warning time for the U.S. and its allies by paying also more attention to external technical assistance from Russia and China, including from hired scientists and engineers, involved in missile programs of North Korea, Iran and other states in the Middle East. Their missile capabilities will further increase, both in numbers and quality in the next years due to new technology breakthroughs as the result of an increasing global proliferation network.

¹⁵⁵ See also Jim Mann, Los Angeles Times, 6 September 2000 (here electronic version).

The 1991 *Persian Gulf War* ("Operation Desert Storm") has shown that those theater ballistic missiles (TBMs) like the Irakian Scud-missiles have still a greater psychological impact than destructive power. In the next years and decades, however, the power of destruction of those TBMs will rapidly increase. These TBMs might be particularly destabilizing due to their inherent elements of surprise (short launch and warning time) as well as of limited possibilities of an early detecting and of effective countermeasures. As the *Rumsfeld-report* and others have confirmed, former US intelligence analyses were based too heavily upon the US and Russian experiences which have led to assessments underestimating the pace of new ballistic missile programs in developing and threshold countries. Those states, for instance, are often content with less accurate and less reliable short- and intermediate-range surface-to surface missiles (SSMs). Unless a country threatened by those TBMs has no adequate early-warning systems for detection and an effective anti-ballistic missile defense to neutralize those missiles under greatest psychological strain it might see no other chance in a mounting crisis than to opt for first strikes as part of preventive or preemptive military options to destroy them before they are launched.

The TMD-debate has important implications for the future of the U.S.-Japanese security alliance in the Asia-Pacific region and will shape the security discussions as well as determine the security perceptions in the first decade of the next century. But although China's nuclear and missile modernization pre-dates the U.S. debate over TMD and NMD and is therefore not driving strategic modernization, these ballistic missile defense programs may create repercussions by fastening ongoing nuclear modernization programs in China, India and Russia.¹⁵⁶ In this light, any policy decisions for TMD programs are justified against the background above for non-nuclear states facing increasing nuclear and missile threats. However, any decisions for a TMD-program must be carefully implemented because of the inherent complexities, possible repercussions as well as due to the political and military implications. Furthermore, because of the varying variables and ramifications in the specific cases of Japan, South Korea and Taiwan, decisions regarding TMD must also be made on a case-by-case basis after analyzing all dimensions of the regional and global security developments.¹⁵⁷

¹⁵⁶ See also Murray Hiebert/Susan V. Lawrence, 'A Call to Arms', FEER, 3 August 2000, pp. 16-19.

¹⁵⁷ See also 'Theater Missile Defenses in the Asia-Pacific Region', Working Report No. 34 (Washington D.C.: Henry Stimson Center, June 2000).

For South Korea, for instance, the missile requirements are quite different to those of Japan and Taiwan. It therefore even does not place high priority on expending resources on lower-tier TMD systems and expects that the U.S. forces on the Korean peninsula will deploy additional lower-tier TMD systems, whereas the U.S. Navy will deploy sea-based, upper-tier TMD systems in the future that have proven their interception capabilities.¹⁵⁸ For Taiwan, upgraded *Patriot* systems (*PAC-3*) and *Aegis*-equipped ships would provide Taiwan with a limited capability against China's ballistic missiles and psychological reassurance to the Taiwanese population. But any transfer of TMD systems to Taiwan could also produce a wide range of negative consequences for the Taiwan Strait and U.S.-China relationships. In this light, the sale of lower-tier TMD systems is more justified, whereas any upper-tier TMD systems should be withheld by the U.S. and linked to the future development of the Taiwan Strait relations and China's military and missile buildup vis-à-vis Taiwan.¹⁵⁹ In this regard, TMD or single TMD systems of the layered defense system may be used as a bargaining chip vis-à-vis China, aimed to freeze and downsize China's missile arsenal.

For South Korea and Taiwan, the only military alternative for TMD (if one excludes a nuclear option) is a long-range missile buildup. That, however, might not only threaten its global and regional MTCR and non-proliferation policies, but perhaps also incite a new arms race in an already complex military-strategic environment in Northeast Asia. Furthermore, it would undermine crisis stability and conflict management by creating additional incentives for preventive or preemptive military strike options on both sides of the Korean peninsula or the Taiwan Strait.

In the case of Japan, both lower and upper-tier TMD systems can be justified but also used as a bargaining chip to create a strategic dialogue with Beijing on regional security issues. Furthermore, the joint TMD development is strengthening the U.S.-Japanese security alliance which is — together with the credibility of the U.S. extended nuclear deterrence in Northeast Asia — the linchpin for the overall regional security and stability in the entire region. In this light, the TMD program with the U.S. should be seen as a "*window of opportunity*" in the next decade and therewith a chance for a strategic

¹⁵⁸ To a convincing critic of South Korea's total disinterest at TMD (it should at least have an interest at lower-tier TMD systems) see Victor Cha, 'A Deal with North Korea? Where Do We Go from Here?', PacNet-Newsletter No. 42, 29 October 1999.

dialogue between Japan and China¹⁶⁰ as well as between the U.S. and China.¹⁶¹ In this light, ultimately it will be China's policies and behavior that will decide upon the deployment and implementation of a Japanese or Japanese-U.S. TMD program. Thereby it should not be overlooked by TMD critics that despite potential repercussions for the U.S.-Sino relationship as well as bilateral relations within East Asia, a TMD system can also dissuade countries from expanding their ballistic missile arsenal and thus contribute to non-proliferation and reduction of the number of missiles equipped with WMD — dependent on its military-technological effectivity. Without an effective TMD, those states expanding their ballistic missile arsenal and WMD programs will not face any military-political repercussions by the international community, which may ultimately translate into appeasement policies by the world community. The "*double standards*" in the western policies vis-à-vis *Kosovo* and *Chechnya* are striking in many ways and may function as a warning indicator because the difference has often been justified by Western politicians that Russia has nuclear weapons. Not it should overlooked that TMD does not represent the prime driving force of a regional arms race because it is simply a response to an ongoing arms buildup: without missiles, no missile defense. Furthermore, most of the global non-proliferation agreements are essentially based on a supply-side approach which suffers from inherent defects: they do not include and address the motivations of those states conducting *WMD* and ballistic missile defense programs. Hence, those arms control agreements and non-proliferation efforts such as the *MCTR* may only buy time and delay and/or constrain the development and deployment of those *WMD* weaponry but not always and for all time prevent the spreading of particular dual-use technologies used for ballistic missile and WMD programs.

In this light, Japan's future security will also be influenced by global developments of proliferation of nuclear weapons and ballistic missile programs such as in Russia and South Asia that already complicates *Tokyo's* search for a more effective arms control

¹⁵⁹ See also Thomas J. Christensen, 'Theater Missile Defense and Taiwan's Security', *Orbis*, Winter 2000, pp. 79-90.

¹⁶⁰ See also Yoshihide Soeya, 'In Defense of No Defense', *Look Japan*, February 2000, p. 23 and Kori J. Urayama, 'Chinese Perspectives on Theater Missile Defense', *Asian Survey*, No. 4, July-August 2000, pp. 599-621.

¹⁶¹ See also Brad Roberts/Robert Manning/Ronald N. Montaperto, 'China: The Forgotten Nuclear Power', *Foreign Affairs*, July-August 2000, pp. 53-63.

policy.¹⁶² Against the background above, Japan should proceed with its joint research and development program of TMD in a highly cautious manner that has to include comprehensive security dialogues and discussions with China and the U.S. concerning TMD and ongoing ballistic missile programs. As *Shinichi Ogawa*, Senior Research Fellow at the *National Institute for Defense Studies (NIDS)* in Tokyo has argued: "*The key to success for controlling ballistic missiles in East Asia depends on the recognition by regional states that strategic stability ensured by the non-deployment of ballistic missiles is more important and desirable than the short-lived military advantages brought about by ballistic missiles.*"¹⁶³

¹⁶² See also Michael J. Green/Katsuhisa Furukawa, 'New Ambitions, Old Obstacles: Japan and Its Search for an Arms Control Strategy', ACT, July/August 2000, pp. 17-24.

¹⁶³ Shinichi Ogawa, 'TMD and Northeast Asian Security', NAPSNET-Special Report, 28 September 2000.